Delta
Environmental
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January 28, 2005

Sent via UPS

Mr. Jay Bento
Santa Ana Fire Department
1439 South Broadway
Santa Ana, California 92707

Subject: Quarterly Update Report Submittal

Dear Mr. Bento:

On behalf of Atlantic Richfield Company, Delta Environmental Consultants, Inc. is submitting the enclosed Quarterly Update Report for the Fourth Quarter 2004. The enclosed quarterly report was prepared for the following ARCO Facility:

ARCO Facility No.	OCHCA Case No.	Location
206	N/A	302 West First Street, Santa Ana

If you have any questions regarding this project, please contact the undersigned at (949) 860-0210.

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

for

Aaron Baird
Project Manager

Dean Richesin
California Registered Geologist No. 3587
Certified Engineering Geologist No. 1055

REGISTERED GEOLOGIST
DEAN A. RICHESIN
No. 1055
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Enclosure: Atlantic Richfield Company Quarterly Update Report

cc: Mr. Darrell Fah, Atlantic Richfield Company, La Palma, California
Ms Valerie Jahn-Bull, Regional Water Quality Control Board – Santa Ana Region
Mr. Fabio Minervini, England Geosystem, Inc., Irvine, California

A member of: Inogen Environmental Alliance

Q:mjr(c:\coverletters\206.doc)

ATLANTIC RICHFIELD COMPANY QUARTERLY SITE STATUS REPORT
FOURTH QUARTER 2004
JANUARY 30, 2005

ARCO Facility No.: 206 Address:	302 West First Street, Santa Ana, California
Atlantic Richfield Co. Environmental Manager / Phone No.:	Darrell Fah / (714) 378-5105
Consulting Co. / Contact Person / Phone No.:	Delta Environmental / Aaron Baird / (949) 360-5795
Primary Agency / Contact Person / Regulatory ID No.:	Santa Ana Fire Department (SAFD) / Jay Bento
Other Agencies to Receive Copies:	California Regional Water Quality Control Board – Santa Ana / Valerie Jahn-Bull

WORK PERFORMED THIS QUARTER (Fourth - 2004):

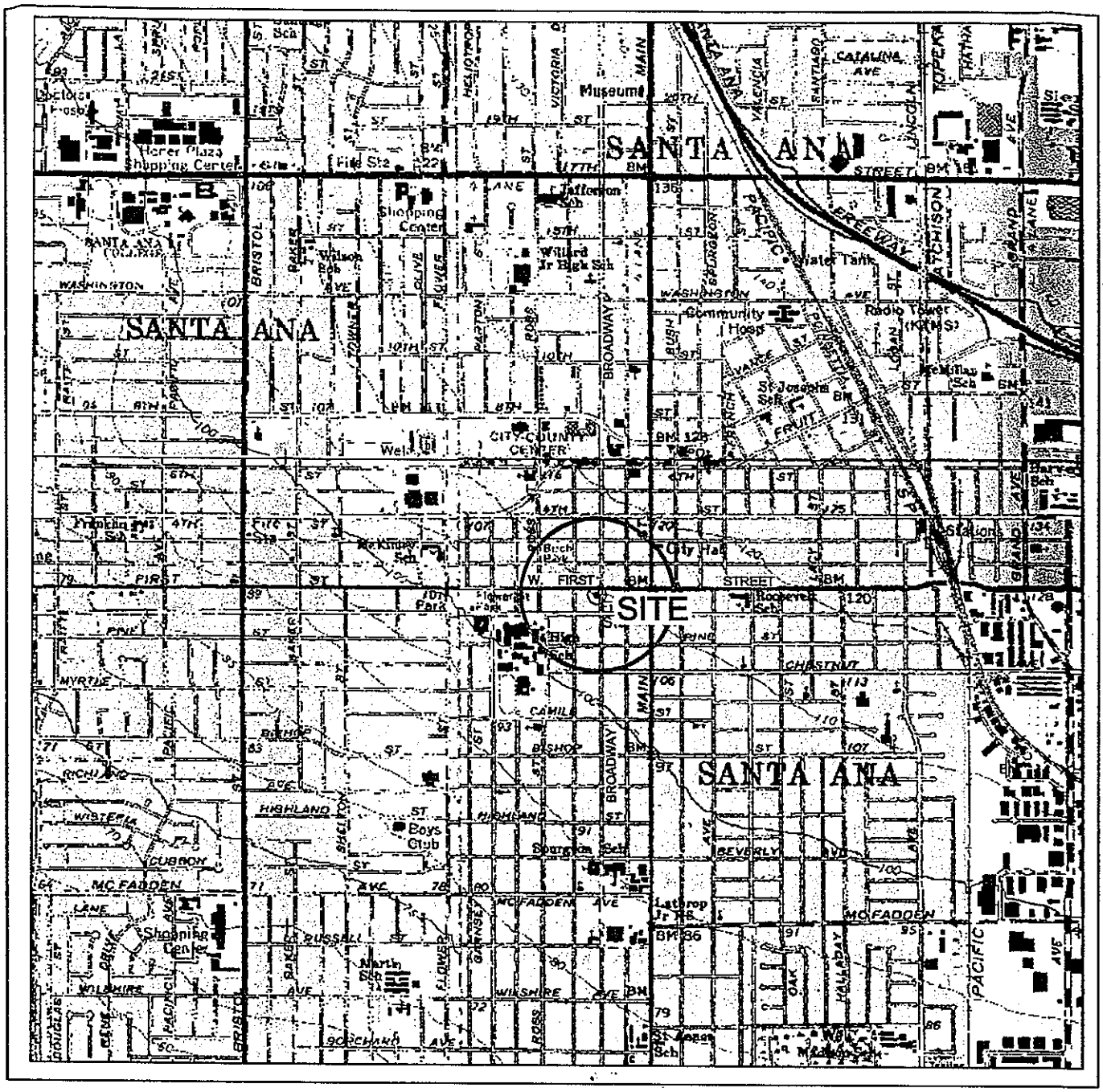
1. Continued operation and maintenance of the soil vapor extraction (SVE) system and continued to cycle the system on a monthly basis.
2. Submitted the third quarter 2004 *Quarterly Status Report*, dated October 29, 2004, to the SAFD.

WORK PROPOSED FOR THE NEXT QUARTER (First - 2005):

1. Submit Quarterly Status Report to the SAFD.
2. In a telephone conversation between Mr. Jay Bento of the SAFD and Mr. Aaron Baird of Delta on January 19, 2005, it was discussed that confirmation soil borings will be required at this site before considering the Site for case closure.
3. Submit a work plan for confirmation soil borings.
4. Upon approval of the work plan for confirmation soil borings from the SAFD, acquire permits and advance the borings.

Current Phase of Project:	Remediation
Frequency of SVE System Sampling:	Monthly
Frequency of SVE System Monitoring:	Weekly
Bulk Soil Removed to Date:	3.86 cubic yards
Hydrocarbons Recovered by SVE to Date:	17,838 pounds (1/3/05)
Permits for Discharge (No.):	Site Specific SCAQMD Permit No. F44491
Water Wells or Surface Waters within 2000':	Production wells SA-13 (scr 303-924'), SA-29 (scr 450-1050'), and SA-33 (scr 425-935') appx 1,800' west
Approximate Depth to Groundwater:	80-100 feet
Groundwater Gradient:	Regional - southwest

Attachments: Figure 1 – Site Location Map
Figure 2 – Site Map
SVE System Operation Summary (Attachment A)
Laboratory Report and Chain-of-Custody Information (Attachment B)



GENERAL NOTES:
BASE MAP FROM 3-D TOPO QUADS
TUSTIN AND NEWPORT BEACH, CA. QUADRANGLE
7.5 MINUTE TOPOGRAPHIC MAP
1965
PHOTOREVISED 1981

QUADRANGLE LOCATION

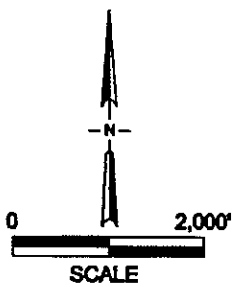
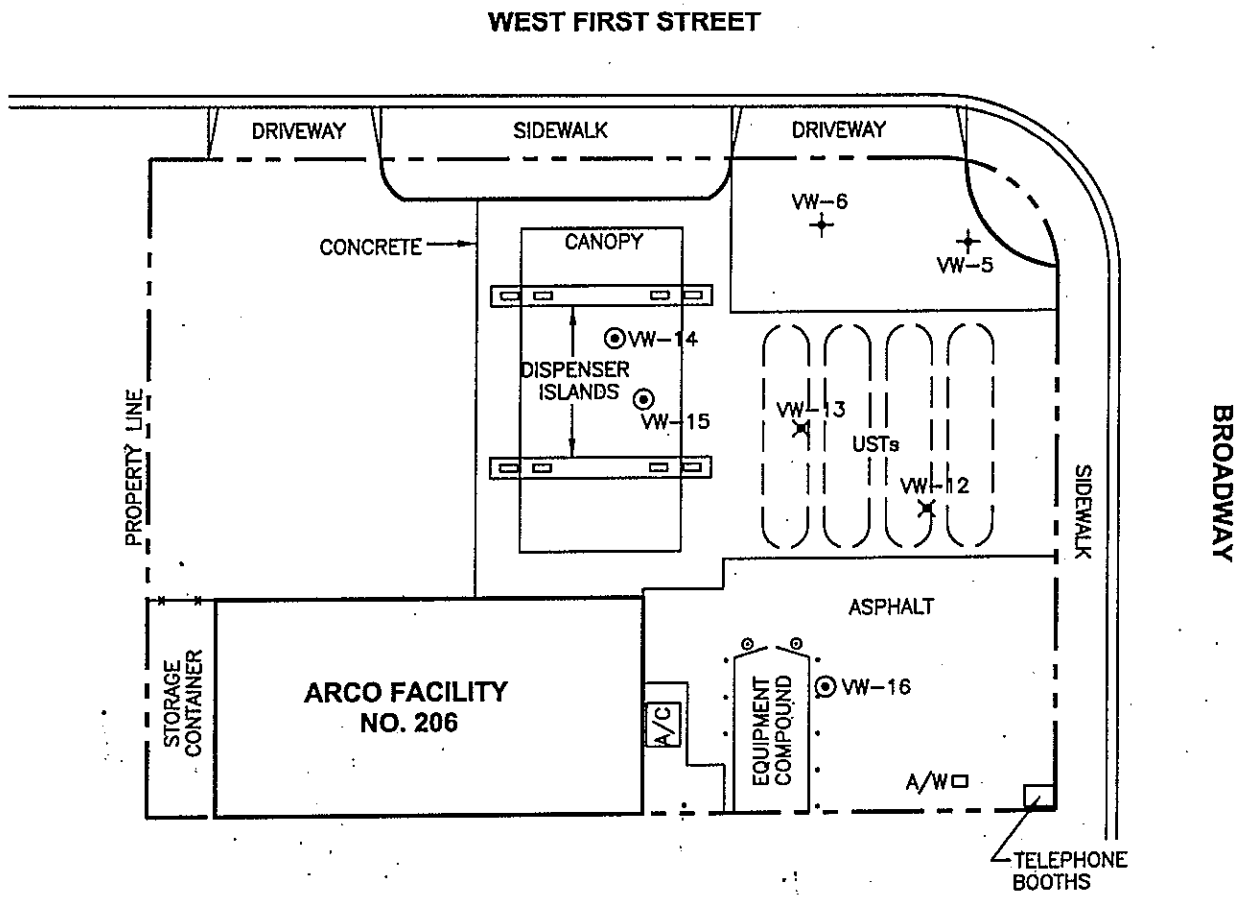


FIGURE 1

SITE LOCATION MAP
ARCO FACILITY NO. 206
302 W. FIRST STREET
SANTA ANA, CA.

PROJECT NO. 00725		DRAWN BY K. MARTIN
FILE NO. A0-725-03		PREPARED BY A. BAIRD
DATE 04 JAN 05	REV. 0	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND

VW-5 ✚ VAPOR EXTRACTION WELL LOCATION (12"ø ROUND WELL BOX)

VW-14 ⊙ VAPOR EXTRACTION WELL LOCATION (24" X 24" SQUARE WELL BOX)

VW-12 ✕ VAPOR EXTRACTION WELL LOCATION (16" CONDUCTOR CASING W/36"ø WELL BOX)

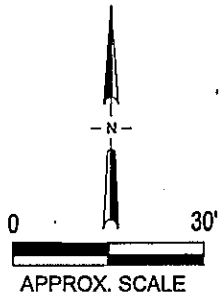


FIGURE 2

SITE MAP
ARCO FACILITY NO. 206
302 W. FIRST STREET
SANTA ANA, CA.

PROJECT NO. 00725		DRAWN BY K. MARTIN
FILE NO. A0-725-02		PREPARED BY A. BAIRD
DATE 04 JAN 05	REV. .0	REVIEWED BY

Delta Environmental Consultants, Inc.

ATTACHMENT A

SVE System Operation Summary

SVE SYSTEM OPERATION SUMMARY - FOURTH QUARTER 2004
ARCO FACILITY NO. 206
302 WEST FIRST STREET
SANTA ANA, CALIFORNIA

BACKGROUND

The soil vapor extraction (SVE) system was started on November 6, 2000. The system consists of a Baker Furnace SX-300 (serial number 196) unit operating in thermal mode connected to seven wells (VW-5, VW-6, VW-12, VW-13, VW-14, VW-15, and VW-16). Laboratory analytical results indicated that influent vapors at startup contained 1,300 parts per million by volume (ppmv) volatile fuel hydrocarbons (VFH) and the effluent vapors contained 7.2 ppmv VFH.

On May 10, 2002, Delta Environmental Consultants, Inc. (Delta) assumed responsibility for the operation and maintenance of the SVE system.

The SVE system operated during the third quarter 2002. The SVE system was down from August 2, 2002 to September 20, 2002 to repair/replace the float switch, the knockout pot, and filter. Laboratory analytical results indicated that influent vapor samples collected on June 28, July 24, and September 24, 2002 contained 120 ppmv, 20 ppmv, and 57 ppmv VFH, respectively.

The SVE system operated during the fourth quarter 2002. Laboratory analytical results indicated that influent vapor samples collected on October 31, 2002 contained 41 ppmv VFH; benzene and methyl tertiary butyl ether (MTBE) were not detected. Approximately 845 pounds (16.6 pounds per day) of hydrocarbons were removed from the subsurface this period. On November 14, 2002, the system was shut down for cycling. On January 1, 2003, the system was restarted, but needed to be shut off shortly after for blower repair.

The electric motor on the blower was repaired and on February 20, 2003, the system was restarted. Laboratory analytical results indicated that influent vapor samples collected on February 20 and March 12, 2003 contained VFH at 180 ppmv and 33 ppmv, respectively. Benzene was detected at 2.2 ppmv in the February 20, 2003 vapor sample. MTBE was not detected in samples collected February 20 or March 12, 2003. On April 30, 2003 the system was shut down for cycling.

On July 15, 2003, the system was restarted. Laboratory analytical results indicated that the influent vapor sample collected on July 15, 2003 contained 370 ppmv VFH; benzene and MTBE were not detected. The SVE system operated for 1,530 hours during the third quarter 2003. Laboratory analytical results indicated that the influent vapor samples collected on July 29, August 19, and September 17, 2003 contained VFH concentrations at 130 ppmv, 73 ppmv, and 120 ppmv; benzene and MTBE were not detected.

The SVE system operated for 1,494 hours during the fourth quarter 2003. Laboratory analytical results indicated that the influent vapor samples collected on October 22 and December 16, 2003 contained VFH concentrations at 250 ppmv and 9.2 ppmv, respectively; benzene and MTBE were not detected.

The SVE system operated for 1,079 hours during the first quarter 2004. Laboratory analytical results indicated that the influent vapor samples collected on January 22, February 6, and March 5, 2004 contained VFH concentrations at 7.6 ppmv, 120 ppmv, and 80 ppmv, respectively; benzene and MTBE were not detected. Approximately 259 pounds (5.7 pounds per day) of hydrocarbons were removed from the subsurface this period.

The SVE system operated for 1,092 hours during the second quarter 2004. Laboratory analytical results indicated that the influent vapor samples collected on April 15, May 5, and June 9, 2004 contained VFH concentrations at 100 ppmv, 91 ppmv, and 74 ppmv, respectively; benzene and MTBE were not detected. Approximately 211 pounds (4.6 pounds per operational day) of hydrocarbons were removed from the subsurface this period.

The SVE system operated for 1,142 hours during the third quarter 2004. The system operational time was approximately 60% through September 8, 2004 when it was shut down for cycling. Laboratory analytical results indicated that the influent vapor samples collected on July 10, August 19, and September 8, 2004 contained VFH concentrations at 61 ppmv, 92 ppmv, and 43 ppmv, respectively. Benzene and MTBE were not detected at or above the laboratory reporting limits of 1.6 ppmv and 1.4 ppmv, respectively.

SVE SYSTEM OPERATION SUMMARY - FOURTH QUARTER 2004
ARCO FACILITY NO. 206
302 WEST FIRST STREET
SANTA ANA, CALIFORNIA

ACTIVITIES DURING REPORTING PERIOD

The SVE system operated for 1,464 hours during the fourth quarter 2004. The system operational time was approximately 52% through January 3, 2005 when it was shut down for cycling. Laboratory analytical results indicated that the influent vapor samples collected on October 4, November 1, December 1, 2004, and January 3, 2005 contained VFH concentrations at 24 ppmv, 9.5 ppmv, less than 2.4 ppmv, and 4.7 ppmv, respectively. Benzene and MTBE were not detected at or above the laboratory reporting limits of 1.6 ppmv and 1.4 ppmv, respectively.

Approximately 31.6 pounds (0.5 pounds per operational day) of hydrocarbons were removed from the subsurface this period. As of January 3, 2005, the SVE system has operated for 31,409 hours and has removed approximately 17,838 pounds of hydrocarbons from the subsurface. A summary of SVE system performance data is provided in Table 1, well source data in Table 2, and individual well analytical data in Table 3. A graph of influent concentrations vs. time is presented as Graph 1 and hydrocarbons removed vs. time as Graph 2.

SCAQMD PERMIT ADHERENCE

The SVE system operated in accordance with the SCAQMD permit requirements during this reporting period.

PROGRESS TOWARDS CLOSURE

Confirmation soil boring activities are going to be conducted to confirm the effectiveness of the SVE system in removing petroleum hydrocarbons from the subsurface. The SVE system will remain off until results of confirmation soil borings are reviewed. If the results of the confirmation soil borings indicate that petroleum hydrocarbon concentrations detected during previous assessments have been remediated, Delta will request regulatory case closure and the system will remain off until case closure is approved. If post remediation soil sample analytical data indicates that the SVE system has not been effective in removing the entire petroleum hydrocarbon mass from the subsurface, further SVE system operation will be evaluated.

TABLE 1

SVE SYSTEM PERFORMANCE DATA

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

DATE	OPERATING HOURS	CUMULATIVE OPERATING HOURS	TOTAL VACUUM (IN H_2O)	FLOW RATE (SCFM)	INFLUENT VFH CONC. (FIELD-PPMV)	EFFLUENT VFH CONC. (FIELD-PPMV)	INFLUENT CONC. (LAB-PPMV) VFH	INFLUENT CONC. (LAB-PPMV) BENZENE	INFLUENT CONC. (LAB-PPMV) MTBE	EFFLUENT CONC. (LAB-PPMV) VFH	EFFLUENT CONC. (LAB-PPMV) BENZENE	STACK TEMP (DEG F)	VFH MASS DESTROYED (LBS)	CUMULATIVE VFH MASS DESTROYED	COMMENTS
11/06/00	4	12,900	50	250	450	7.2	1300	5.1	5.8	7.2	<1.6	1524	21	21	Wells VW-5, VW-6, VW-12, VW-13, VW-14, VW-15, and
11/07/00	46	12,946	42	231	271	3.4	NA	NA	NA	NA	NA	1568	46	67	VW-15 connected to system
11/08/00	7	12,953	39	233	250	5.6	NA	NA	NA	NA	NA	1587	6	73	
11/09/00	24	12,977	43	232	850	8.7	NA	NA	NA	NA	NA	1574	75	148	
11/10/00	20	12,997	40	233	540	4.7	NA	NA	NA	NA	NA	1590	40	188	
11/13/00	93	13,070	38	236	516	5.1	NA	NA	NA	NA	NA	1575	179	327	
11/15/00	121	13,118	38	229	560	3.9	NA	NA	NA	NA	NA	1582	246	433	
11/22/00	165	13,283	35	226	243	2.6	NA	NA	NA	NA	NA	1560	143	577	
11/27/00	123	13,406	38	222	520	3.1	NA	NA	NA	NA	NA	1573	225	802	
12/07/00	242	13,648	39	218	696	3.4	NA	NA	NA	NA	NA	1600	581	1,383	
12/11/00	93	13,741	39	218	549	1.7	530	1.8	2.9	7.9	<1.6	1523	170	1,553	
12/22/00	263	14,004	41	215	650	1.7	NA	NA	NA	NA	NA	1571	582	2,135	
12/27/00	119	14,123	44	211	345	1.6	NA	NA	NA	NA	NA	1541	137	2,272	
01/02/01	147	14,270	50	198	233	0.7	NA	NA	NA	NA	NA	1559	107	2,379	
01/10/01	52	14,322	80	211	350	0	620	2.7	3.3	<2.4	<1.6	1555	108	2,487	
01/15/01	119	14,441	80	205	649	0	NA	NA	NA	NA	NA	1605	251	2,738	
01/22/01	160	14,601	75	211	490	0.7	NA	NA	NA	NA	NA	1599	261	2,999	
01/29/01	171	14,772	60	224	636	0	NA	NA	NA	NA	NA	1553	387	3,386	
02/05/01	168	14,940	60	211	479	0	NA	NA	NA	NA	NA	1550	269	3,655	
02/12/01	168	15,108	40	240	645	0	270	<1.6	2.3	<2.4	<1.6	1524	172	3,827	
03/20/01	181	15,290	85	195	450	2.1	290	<1.6	2.3	<2.4	<1.6	1543	162	3,989	
03/27/01	152	15,442	64	207	562	0.2	NA	NA	NA	NA	NA	1671	280	4,270	
04/02/01	143	15,585	62	197	473	0	NA	NA	NA	NA	NA	1609	211	4,200	
04/09/01	152	15,737	60	198	499	0	320	<6.4	<5.6	12	<1.6	1521	152	4,352	
04/16/01	165	15,901	64	195	467	0	NA	NA	NA	NA	NA	1515	238	4,590	
04/23/01	163	16,064	61	196	594	0	NA	NA	NA	NA	NA	1521	300	4,890	
05/01/01	188	16,252	62	191	2251	0	NA	NA	NA	NA	NA	1521	1277	6,167	
05/07/01	135	16,387	60	190	1324	0	160	<3.2	<2.8	5.3	<1.6	1519	65	6,232	
05/14/01	161	16,548	60	189	447	0	NA	NA	NA	NA	NA	1496	215	6,447	
05/21/01	161	16,708	60	188	522	0	NA	NA	NA	NA	NA	1500	250	6,696	
06/05/01	2	16,710	70	190	882	0	250	<1.6	<1.4	<2.4	<1.6	1522	1	6,698	
06/12/01	148	16,858	64	194	2137	0	NA	NA	NA	NA	NA	1521	974	7,672	
06/19/01	168	17,026	64	192	630	0	NA	NA	NA	NA	NA	1523	321	7,992	
06/26/01	170	17,196	60	191	579	0	NA	NA	NA	NA	NA	1540	297	8,290	
07/03/01	144	17,340	62	191	364	0	NA	NA	NA	NA	NA	1395	159	8,449	
07/10/01	0	17,340	60	190	89.4	0	19	<1.6	<1.4	<2.4	<1.6	1368	0	8,449	
07/17/01	139	17,479	60	175	126	0	NA	NA	NA	NA	NA	1372	48	8,497	
07/30/01	196	17,675	55	226	207	0	NA	NA	NA	NA	NA	1408	145	8,642	
08/16/01	12	17,687	44	225	382	2.9	200	<1.6	<1.4	<2.4	<1.6	1369	9	8,651	
08/20/01	259	17,946	40	225	385	0	NA	NA	NA	NA	NA	1372	355	9,006	System shut down on 8/27 (temperature controller broken)
10/02/01	0	Hour meter broken	60	231	438	0	NA	NA	NA	NA	NA	1455	0	9,006	
10/09/01	168	Hour meter broken	70	202	525	1.4	390	<3.2	<2.8	<2.4	<1.6	1586	282	9,288	
10/18/01	216	Hour meter broken	79	200	477	1.2	NA	NA	NA	NA	NA	1489	326	9,614	
10/22/01	96	Hour meter broken	75	205	525	0	NA	NA	NA	NA	NA	1469	164	9,778	
10/30/01	192	17,915	60	205	611	0	NA	NA	NA	NA	NA	1446	381	10,159	Replaced hour meter

TABLE 1

SVE SYSTEM PERFORMANCE DATA

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

DATE	OPERATING HOURS	CUMULATIVE OPERATING HOURS	TOTAL VACUUM (IN H_2O)	FLOW RATE (SCFM)	INFLUENT VFH CONC. (FIELD-PPMV)	EFFLUENT VFH CONC. (FIELD-PPMV)	INFLUENT CONC. (LAB-PPMV) VFH	INFLUENT CONC. (LAB-PPMV) BENZENE	INFLUENT CONC. (LAB-PPMV) MTBE	EFFLUENT CONC. (LAB-PPMV) VFH	EFFLUENT CONC. (LAB-PPMV) BENZENE	STACK TEMP (DEG F)	VFH MASS DESTROYED (LBS)	CUMULATIVE VFH MASS DESTROYED	COMMENTS
11/05/01	140	18,055	80	211	240	NA	240	<1.6	<1.4	13	<1.6	1414	112	10,271	
11/15/01	238	18,293	68	226	162	4.2	NA	NA	NA	NA	NA	1399	138	10,409	
11/27/01	291	18,584	100	205	674	11	NA	NA	NA	NA	NA	1488	637	11,045	System shut down on 12/3 (blower broken)
02/21/02	90	18,674	40	137	206	4.2	530	4.8	4.1	<2.4	<1.6	1679	40	11,085	Replaced blower, restarted system
02/25/02	32	18,705	30	140	199	3.1	NA	NA	NA	NA	NA	1636	14	11,099	
03/06/02	215	18,920	31	138	201	4.6	500	<1.6	1.8	<2.4	<1.6	1624	94	11,193	
03/15/02	214	19,133	26	143	226	3.4	NA	NA	NA	NA	NA	1686	109	11,303	
03/22/02	163	19,296	24	144	1028	4.6	NA	NA	NA	NA	NA	1597	382	11,685	
03/25/02	79	19,375	24	142	549	3.1	NA	NA	NA	NA	NA	1759	97	11,782	
04/04/02	233	19,608	30	142	2573	7.9	NA	NA	NA	NA	NA	1520	1346	13,128	
04/12/02	197	19,805	30	143	536	0	NA	NA	NA	NA	NA	1520	239	13,367	Optimized system for maximum output
04/17/02	117	19,922	40	136	2271	3.8	NA	NA	NA	NA	NA	1560	573	13,940	
04/22/02	121	20,043	42	135	1956	5.6	NA	NA	NA	NA	NA	1568	506	14,447	
04/30/02	0	20,044	54	132	2571	12.5	NA	NA	NA	NA	NA	1416	2	14,449	
05/10/02	246	20,289	5	143	84	0	NA	NA	NA	NA	NA	1528	47	14,495	Shut down system at departure for cycling
06/28/02	1	20,291	10	144	340	0	120	1.3	68	10	<1.2	1333	1	14,496	Restarted
07/06/02	188	20,479	40	142	800	8	NA	NA	NA	NA	NA	1524	339	14,835	
07/11/02	117	20,596	NA	142	256	0	NA	NA	NA	NA	NA	1532	68	14,903	
07/15/02	100	20,696	NA	140	214	0	NA	NA	NA	NA	NA	1510	47	14,950	
07/24/02	213	20,909	NA	141	255	0	20	<1.2	9.5	3.9	<1.2	1520	10	14,960	
08/02/02	215	21,124	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	System running w/out vacuum; shut-off
09/20/02	7	21,132	20	141	237	0	NA	NA	NA	NA	NA	1451	4	14,963	Installed float switch, cleaned filter, restarted system
09/24/02	92	21,224	90	121	98.6	0	57	<1.6	<1.4	4.3	<1.6	1450	10	14,973	
10/04/02	236	21,460	110	118	101.4	0	NA	NA	NA	NA	NA	1452	45	15,018	
10/10/02	149	21,610	114	119	566	13.4	NA	NA	NA	NA	NA	1474	159	15,177	
10/15/02	116	21,725	110	117	574	12.7	NA	NA	NA	NA	NA	1448	123	15,300	
10/22/02	171	21,896	106	117	528	11.8	NA	NA	NA	NA	NA	1466	168	15,468	
10/31/02	217	22,113	98	98	241	6.8	41	<1.6	<1.4	<2.4	<1.6	1447	14	15,482	
11/07/02	163	22,276	120	113	562	12	NA	NA	NA	NA	NA	1423	164	15,646	
11/14/02	171	22,447	32	134	475	14	NA	NA	NA	NA	NA	1415	172	15,818	Shut down for cycling at departure.
01/21/03	2	22,449	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.2	15,818	Restarted system; shut off for blower repair
02/13/03	0.4	22,449	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.03	15,818	Repaired electric motor on blower
02/20/03	0.4	22,450	106.7	80.5	1541	0.1	180	2.2	<1.4	<2.4	<1.6	1475	0.09	15,818	Restarted system
02/27/03	167.3	22,617	113	NA	1584	15.8	NA	NA	NA	NA	NA	1414	38	15,856	Flame inlet screen cleaned
03/06/03	163.5	22,781	118	57.7	1429	16.8	NA	NA	NA	NA	NA	1429	27	15,883	
03/12/03	150.6	22,931	120	62.5	246	0.3	33	<1.6	<1.4	<2.4	<1.6	1543	5	15,888	Flame temp below limits - adjusted flame actuator
03/19/03	166.8	23,098	120	71	159	7.7	NA	NA	NA	NA	NA	1456	6	15,894	VW-16 10% - 20% open
03/27/03	184.8	23,283	98	143	1535	0	NA	NA	NA	NA	NA	1418	14	15,908	
04/02/03	150.9	23,434	119	150	1211	4.9	NA	NA	NA	NA	NA	1480	12	15,920	Shut down for cycling at departure.
04/30/03	0.1	23,434	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15,920	Restarted system for maintenance; shut off at departure
07/15/03	5.7	23,440	34	143	2314	0	370	1.6	<1.4	10	<1.6	1340	5	15,925	Restarted system after cycling
07/22/03	168.9	23,608	30	144	1730	0	NA	NA	NA	NA	NA	1325	142	16,067	
07/29/03	158.0	23,766	120	143	117	0	130	<1.6	<1.4	3.7	<1.6	1303	46	16,114	
08/05/03	170.7	23,937	120	144	115	0	NA	NA	NA	NA	NA	1330	51	16,164	
08/12/03	169.5	24,107	120	145	111	0.1	NA	NA	NA	NA	NA	1341	51	16,215	

TABLE 1

SVE SYSTEM PERFORMANCE DATA

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

DATE	OPERATING HOURS	CUMULATIVE OPERATING HOURS	TOTAL VACUUM (IN H_2O)	FLOW RATE (SCFM)	INFLUENT VFH CONC. (FIELD-PPMV)	EFFLUENT VFH CONC. (FIELD-PPMV)	INFLUENT CONC. (LAB-PPMV) VFH	INFLUENT CONC. (LAB-PPMV) BENZENE	INFLUENT CONC. (LAB-PPMV) MTBE	EFFLUENT CONC. (LAB-PPMV) VFH	EFFLUENT CONC. (LAB-PPMV) BENZENE	STACK TEMP (DEG F)	VFH MASS DESTROYED (LBS)	CUMULATIVE VFH MASS DESTROYED	COMMENTS
08/19/03	167.3	24,274	99	145	1872	18.9	73	<1.6	<1.4	<2.4	<1.6	1331	28	16,243	Laboratory data collected on 8/20/2003
08/26/03	169.3	24,443	98	144	1749	16.8	NA	NA	NA	NA	NA	1321	28	16,271	
09/04/03	215.3	24,659	110	145	439	19	NA	NA	NA	NA	NA	1335	36	16,307	
09/10/03	145.0	24,804	120	145	364	14.6	NA	NA	NA	NA	NA	1372	24	16,331	
09/17/03	168.6	24,972	118	146	475	26.3	120	<1.6	<1.4	<2.4	<0.059	1339	47	16,378	Fixed broken sample port at VW-15
09/24/03	166.3	25,138	20	181	126	13.2	NA	NA	NA	NA	NA	1337	57	16,435	Shut down system at departure for cycling
10/15/03	0.6	25,139	140	85.6	312.6	3.8	NA	NA	NA	NA	NA	1412	0.1	16,436	Restarted system after cycling
10/22/03	170.7	25,310	150	101	327.4	0.2	250	<6.4	<5.6	<2.4	0.21	1422	68	16,504	
10/28/03	148.3	25,458	147	132	309	2.1	NA	NA	NA	NA	NA	1419	77	16,581	
11/06/03	215.3	25,673	120	143	270	3	NA	NA	NA	NA	NA	1420	122	16,703	
11/13/03	169.0	25,842	125	146	242.6	1.8	NA	NA	NA	NA	NA	1422	98	16,801	
11/20/03	161.4	26,004	134	145	337.1	2.4	NA	NA	NA	NA	NA	1489	93	16,893	
11/26/03	143.8	26,148	140	145	314.1	0.5	NA	NA	NA	NA	NA	1435	83	16,976	
12/04/03	193.2	26,341	130	152	179.6	0	NA	NA	NA	NA	NA	1451	116	17,092	
12/09/03	124.8	26,466	135	143	167	0	NA	NA	NA	NA	NA	1468	71	17,163	
12/16/03	166.4	26,632	20	183	154	0	9.2	<1.6	<1.4	<2.4	<0.059	1451	4	17,167	Shut down system at departure for cycling
01/20/04	0.7	26,633	90	162	180	0	7.6	<1.6	<1.4	<2.4	<0.059	1303	0.01	17,167	Restarted system after cycling; collected samples on 1/22/04
01/27/04	165.7	26,798	88	160	165	0	NA	NA	NA	NA	NA	1466	3	17,170	
02/03/04	169.2	26,968	80	149	167	0	120	<1.6	<1.4	3.9	<0.059	1339	48	17,218	Adjusted dilution air; collected samples on 2/6/2004
02/10/04	170.9	27,138	80	154	161	0	NA	NA	NA	NA	NA	1445	50	17,268	
02/17/04	167.7	27,306	74	179	167	0	NA	NA	NA	NA	NA	1313	57	17,325	Adjusted alarm for dilution
02/24/04	167.7	27,474	76	165	171	0	NA	NA	NA	NA	NA	1315	53	17,378	
03/05/04	237.2	27,711	62	159	90	0	80	<1.6	<1.4	2.5	<0.059	1405	48	17,426	Shut down at departure for 1 month of cycling
04/07/04	3.0	27,714	65	152	160	0	NA	NA	NA	NA	NA	1379	1	17,426	Restarted system after cycling
04/15/04	192	27,906	70	151	80	0	100	<1.6	<1.4	2.6	<0.059	1409	46	17,472	
04/21/04	142	28,048	70	149	80	0	NA	NA	NA	NA	NA	1402	33	17,506	
04/26/04	124	28,172	72	149	85	8	NA	NA	NA	NA	NA	1402	29	17,535	
05/05/04	218	28,390	72	127	80	4	91	<1.6	<1.4	<2.4	<0.059	1419	40	17,575	Shut down at departure for 1 month of cycling
06/04/04	0	28,390	68	127	190	0	NA	NA	NA	NA	NA	1376	0	17,575	Restart system after cycling
06/09/04	124	28,514	72	127	150	0	74	<1.6	<1.4	<2.4	<0.059	1423	18	17,593	
06/16/04	164	28,678	78	128	80	0	NA	NA	NA	NA	NA	1398	25	17,618	
06/21/04	125	28,803	80	128	80	0	NA	NA	NA	NA	NA	1407	19	17,637	
06/28/04	168	28,971	82	126	90	0	NA	NA	NA	NA	NA	1410	25	17,661	
07/10/04	279	29,250	80	127	70	0	61	<1.6	<1.4	<2.4	<0.0022	1408	34	17,696	Shut down at departure for 1 month of cycling
08/10/04	2	29,252	74	125	150	6	NA	NA	NA	NA	NA	1430	0.2	17,696	Restart system after cycling, replaced combustion actuator
08/19/04	210	29,462	80	127	120	0	92	<1.6	<1.4	3.3	<0.010	1400	39	17,735	
08/24/04	123	29,585	82	125	110	5	NA	NA	NA	NA	NA	1399	22	17,757	
09/01/04	192	29,777	84	125	80	5	NA	NA	NA	NA	NA	1398	35	17,792	
09/08/04	168	29,945	84	125	80	7	43	<1.6	<1.4	NA	NA	1393	14	17,806	Shut down at departure for 1 month of cycling
10/04/04	4	29,949	16	144	26	2	24	<1.6	<1.4	3.3	<0.059	1408	0.2	17807	Restart system after cycling
10/11/04	162	30,111	99	122	55	2	NA	NA	NA	NA	NA	1397	7.5	17814	
10/18/04	174	30,285	98	121	53	2	NA	NA	NA	NA	NA	1392	8.0	17822	
10/25/04	161	30,446	100	123	46	2	NA	NA	NA	NA	NA	1412	7.5	17830	
11/01/04	168	30,614	20	145	2	0	9.5	<1.6	<1.4	5.6	<0.059	1412	3.7	17833	Shut down at departure for 1 month of cycling
12/01/04	3	30,617	16	145	71	0	<2.4	<1.6	<1.4	<2.4	<0.059	1410	0.01	17833	Restart system after cycling

TABLE 1

SVE SYSTEM PERFORMANCE DATA

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

DATE	OPERATING HOURS	CUMULATIVE OPERATING HOURS	TOTAL VACUUM (IN H_2O)	FLOW RATE (SCFM)	INFLUENT VFH CONC. (FIELD-PPMV)	EFFLUENT VFH CONC. (FIELD-PPMV)	INFLUENT CONC. (LAB-PPMV) VFH	INFLUENT CONC. (LAB-PPMV) BENZENE	INFLUENT CONC. (LAB-PPMV) MTBE	EFFLUENT CONC. (LAB-PPMV) VFH	EFFLUENT CONC. (LAB-PPMV) BENZENE	STACK TEMP (DEG F)	VFH MASS DESTROYED (LBS)	CUMULATIVE VFH MASS DESTROYED	COMMENTS
12/07/04	144	30,761	95	122	20	0	NA	NA	NA	NA	NA	1418	0.7	17834	
12/14/04	169	30,930	92	125	47	0	NA	NA	NA	NA	NA	1400	0.8	17835	
12/20/04	143	31,073	92	125	52	0	NA	NA	NA	NA	NA	1399	0.7	17835	
12/28/04	191	31,264	88	126	44	0	NA	NA	NA	NA	NA	1403	0.9	17836	
01/03/05	145	31,409	20	146	6	0	4.7	<1.6	<1.4	<2.4	<0.059	1441	1.6	17838	Shut down at departure for 1 month of cycling

Notes:

SVE	= Soil vapor extraction	Deg F	= Degrees Fahrenheit
VFH	= Volatile fuel hydrocarbons	NA	= Not analyzed/available
PPMV	= Parts per million by volume	LBS	= Pounds
Conc.	= Concentration	Temp.	= Temperature
SCFM	= Standard cubic feet per minute	<1.6	= Not detected at or above stated laboratory reporting limit

Field data used in calculations except when laboratory results available until first quarter 2003. During first quarter 2003 and after, lab data only was used to calculate pounds removed.
When flow rate is not available previous recorded flow rate is used to calculate pounds removed.
AQMD permit requirement: Benzene effluent <0.691 ppmv; bold values are >0.691.

TABLE 2

WELL SOURCE DATA

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

Date	WELL IDENTIFICATION NUMBER																				
	VW-5			VW-6			VW-12			VW-13			VW-14			VW-15			VW-16		
	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)
11/06/00	100	50	(2100) 1248	100	50	(6500) 1924	100	50	(3900) 1250	100	50	(2000) 630	0	0	NM	100	50	(890) 266	100	50	(1200) 700
11/07/00	100	42	971	100	42	2017	100	42	1169	100	42	540	0	0	NM	100	42	367	100	42	891
11/08/00	100	39	693	100	39	1964	100	39	981	100	39	523	0	0	NM	100	39	302	100	39	260
11/09/00	100	43	1250	100	43	3567	100	43	2190	100	43	1330	0	0	NM	100	43	782	100	43	510
11/10/00	100	40	1176	100	40	3711	100	40	1075	100	40	1219	0	0	NM	100	40	961	100	40	864
11/13/00	100	38	12.3	100	38	41.8	100	38	11.6	100	38	12.1	0	0	NM	100	38	988	100	38	857
11/15/00	100	38	1236	100	38	2269	100	38	971	100	38	1246	0	0	NM	100	38	901	100	38	923
11/22/00	100	35	NM	100	35	NM	100	35	NM	100	35	NM	0	0	NM	100	38	NM	100	38	NM
11/27/00	100	38	NM	100	38	NM	100	38	NM	100	38	NM	0	0	NM	100	38	NM	100	38	NM
12/07/00	100	39	492	100	39	2861	100	39	1067	100	39	1612	0	0	NM	100	39	492	100	39	145
12/11/00	100	39	563	100	39	2546	100	39	971	100	39	1733	0	0	NM	100	39	550	100	39	259
12/22/00	100	41	479	100	41	2172	100	41	1027	100	41	1811	0	0	0	100	41	636	100	41	210
12/27/00	100	44	569	100	44	1580	100	44	1564	100	44	1581	0	0	0	100	44	333	100	44	426
01/02/01	100	50	681	100	50	1477	100	50	1611	100	50	1539	0	0	0	100	50	370	100	50	510
01/10/01	100	80	725	100	80	1450	100	80	1671	100	80	1297	0	0	0	100	80	494	100	50	381
01/15/01	100	80	NM	100	80	NM	100	80	NM	100	80	NM	100	80	NM	100	80	NM	100	80	NM
01/22/01	100	75	NM	100	75	NM	100	75	NM	100	75	NM	100	75	NM	100	75	NM	100	75	NM
01/29/01	100	60	(740) 659	100	60	(180) 1511	100	60	(1300) 1626	100	60	(3200) 1343	100	60	(370) 1176	100	60	(270) 581	100	60	(49) 467
02/05/01	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM
02/12/01	100	40	NM	100	40	NM	100	40	NM	100	40	NM	100	40	NM	100	40	NM	100	40	NM
03/20/01	100	85	432	100	85	2575	100	85	2552	100	85	2278	100	85	230	100	85	110	100	85	127
03/27/01	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM
04/02/01	100	62	NM	100	62	NM	100	62	NM	100	62	NM	100	62	NM	100	62	NM	100	62	NM
04/09/01	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM
04/16/01	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM
04/23/01	100	61	NM	100	61	NM	100	61	NM	100	61	NM	100	61	NM	100	61	NM	100	61	NM
05/01/01	100	62	NM	100	62	NM	100	62	NM	100	62	NM	100	62	NM	100	62	NM	100	62	NM
05/07/01	100	60	1264	100	60	857	100	60	3001	100	60	3431	100	60	280	100	60	276	100	60	100
05/14/01	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM
05/21/01	100	60	1452	100	60	2211	100	60	1460	100	60	3755	100	60	601	100	60	148	100	60	66.5
06/05/01	100	70	2331	100	70	2839	100	70	2310	100	70	3910	100	70	1016	100	70	231	100	70	150
06/12/01	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM
06/19/01	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM	100	64	NM
06/26/01	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM
07/03/01	100	62	NM	100	62	NM	100	62	NM	100	62	NM	100	62	NM	100	60	NM	100	60	NM
07/10/01	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM
07/17/01	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM	100	60	NM
07/30/01	100	55	1964	100	55	2566	100	55	2119	100	55	3547	100	55	931	100	55	228	100	55	118
08/16/01	100	44	897	100	44	2850	100	44	17.5	100	44	2297	100	44	394	100	44	45.8	100	44	75.2
08/20/01	100	40	NM	100	40	NM	100	40	NM	100	40	NM	100	40	NM	100	40	NM	100	40	NM
10/02/01	100	60	407	100	60	4986	50	60	35.6	100	60	1611	100	60	352	50	60	46.8	50	60	68.5
10/09/01	100	70	NM	100	70	NM	50	70	NM	100	70	NM	100	70	NM	50	70	NM	50	70	NM
10/18/01	100	78	NM	100	78	NM	70	78	NM	100	78	NM	100	78	NM	70	78	NM	70	78	NM
10/22/01	100	75	NM	100	75	NM	50	75	NM	100	75	NM	100	75	NM	50	75	NM	50	75	NM
10/30/01	100	60	NM	100	60	NM	50	60	NM	100	60	NM	100	60	NM	50	60	NM	50	60	NM
11/06/01	100	80	NM	100	80	NM	50	80	NM	100	80	NM	100	80	NM	50	80	NM	50	80	NM
11/15/01	100	68	NM	100	68	NM	100	68	NM	100	68	NM	100	68	NM	50	68	NM	50	68	NM
11/27/01	25	104	171	100	111	933	10	110	108	100	105	838	25	48	167	0	0	NM	0	0	NM
02/21/02	50	30	51.3	100	34	148	0	0	NM	100	36	345	50	34	74.6	0	0	NM	0	0	NM
02/25/02	50	26	NM	100	30	NM	0	0	NM	100	30	NM	50	24	NM	0	0	NM	0	0	NM

TABLE 2

WELL SOURCE DATA

ARCO Facility No. 206
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Santa Ana, CA

Date	WELL IDENTIFICATION NUMBER																				
	VW-5			VW-6			VW-12			VW-13			VW-14			VW-15			VW-16		
	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)
03/06/02	50	28	48.2	100	31	127	0	0	NM	100	31	352	50	28	70.8	0	0	NM	0	0	NM
03/15/02	50	15	37.9	100	26	116	0	0	NM	100	24	315	50	15	61.2	0	0	NM	0	0	NM
03/22/02	50	23	304	100	24	1240	0	0	NM	100	25	2512	50	12	771	0	0	NM	0	0	NM
03/25/02	50	15	269	100	24	984	0	0	NM	100	24	1167	50	15	589	0	0	NM	0	0	NM
04/04/02	50	15	246	100	24	1072	0	0	0	100	24	2551	50	15	766	0	0	0	0	0	0
04/12/02	0	NM	NM	100	28	4006	0	NM	NM	100	28	2463	0	NM	NM	0	NM	NM	0	NM	NM
04/17/02	0	0	0	100	40	3562	0	0	0	100	40	2189	0	0	0	0	0	0	0	0	0
04/22/02	0	0	0	100	40	3391	0	0	0	100	40	1996	0	0	0	0	0	0	0	0	0
04/30/02	0	0	0	100	54	3788	0	0	0	100	54	2134	0	0	0	0	0	0	0	0	0
05/10/02	0	NM	0	100	NM	74	0	NM	NM	100	NM	64	0	NM	NM	0	NM	0	0	NM	0
06/28/02	0	NM	(12) 52	100	NM	(180) 3804	0	NM	(13) 0	100	NM	(130) 1531	0	NM	NM	0	NM	(8.5) 22	0	NM	(9.9) 37
07/06/02	0	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
07/11/02	0	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
07/15/02	0	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
07/24/02	0	NM	NM	100	10	NM	0	NM	NM	100	10	NM	0	NM	NM	0	NM	NM	0	NM	NM
08/02/02	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
08/20/02	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
09/20/02	100	20	240	100	20	1726	0	0	17	100	20	215	100	20	235.4	0	0	18.6	0	0	35.7
09/24/02	100	80	408	100	80	(450) 921	0	NM	NM	50	10	16	--	--	--	0	NM	NM	0	NM	NM
10/04/02	100	NM	NM	100	NM	NM	100	NM	NM	5	NM	NM	100	NM	NM	100	NM	NM	100	NM	NM
10/10/02	100	NM	(230)	100	NM	(440)	100	NM	(1400)	0	NM	(4.0) NM	100	NM	NM	100	NM	(79)	100	NM	(12)
10/15/02	100	NM	NM	100	NM	NM	100	NM	(4.0)	0	NM	NM	100	NM	NM	100	NM	NM	100	NM	NM
10/22/02	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	100	NM	NM	100	NM	NM
10/31/02	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
11/07/02	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	100	NM	NM	100	NM	NM
11/14/02	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	100	NM	NM	100	NM	NM
01/21/03	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	100	NM	NM	100	NM	NM
02/13/03	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	100	NM	NM	100	NM	NM
02/20/03	100	104.5	>4,000	100	104.6	>4,000	100	104.9	>4,000	0	NM	NM	100	105.2	1224	100	104.4	141	100	104.5	226
02/27/03	100	NM	>4,000	100	NM	206	100	NM	2338	0	NM	NM	100	NM	144	100	NM	134.5	100	NM	140
03/06/03	100	109	>4,000	100	109.2	186	100	106.3	1967	0	NM	NM	100	107	129	100	109.3	108.3	100	109.4	118
03/12/03	100	NM	869	100	NM	436	100	NM	810	0	NM	NM	100	NM	NM	100	NM	103.1	100	NM	384
03/19/03	100	106	452	100	106.5	124	100	106.1	1371	0	NM	NM	100	NM	NM	10	66.6	10.5	10	80.4	59.6
03/27/03	100	96.1	2503	100	94.1	2528	100	95	>4,000	0	NM	NM	100	NM	NM	100	96.1	746	100	75.2	496
04/02/03	100	109	2431	100	108	2608	100	109	>4,000	0	NM	NM	100	107	NM	100	109	610	100	109	312
04/30/03	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM
07/15/03	100	NM	1750	100	NM	3200	100	NM	4320	0	NM	NM	100	NM	NM	100	NM	670	100	NM	290
07/22/03	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	100	NM	NM	100	NM	NM
07/29/03	100	92	(520) 412	100	>100	(1200) 1256	100	>100	(140) 1010	0	NM	NM	100	>100	(200) 122	100	>100	(61) 0	100	84	(51) 0
08/05/03	100	NM	400	100	NM	1176	100	NM	979	0	NM	NM	100	NM	115	100	NM	0	100	NM	0
08/12/03	100	NM	350	100	NM	997	100	NM	960	0	NM	NM	100	NM	114	100	NM	0	100	NM	0
08/19/03	100	89.2	1197	100	90.1	>4,000	100	90	>4,000	0	NM	NM	100	88.4	>4,000	100	88.8	3482	100	79.2	2971
08/26/03	100	90	1042	100	90.2	>4,000	100	89.9	>4,000	0	NM	NM	100	87	>4,000	100	88.2	3605	100	80.2	3002
09/04/03	100	87	720	100	90	1202	100	87	1768	0	NM	NM	100	89	444	100	88	376	100	82	729
09/10/03	100	85	680	100	91	1215	100	85	1649	0	NM	NM	100	80	503	100	84	218	100	80	719
09/17/03	100	NM	734	100	NM	1348	100	NM	936	0	NM	NM	100	NM	80.1	100	NM	201	100	NM	163
09/24/03	100	19	NM	100	19	NM	100	19	NM	0	19	NM	100	19	NM	100	19	NM	100	19	NM
10/15/03	100	>100	(77) 125.6	100	>100	(280) 1407	100	>100	(12) 21.3	0	NM	(20) 82.5	100	>100	(9.5) 37	0	NM	(<2.4) 1.1	100	>100	(<2.4) 0.4
10/22/03	100	150	245.7	100	150	605.5	100	150	471.3	0	0	14.4	100	145	37.1	5-15	14	4.7	0	0	1.4

TABLE 2

WELL SOURCE DATA

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

Date	WELL IDENTIFICATION NUMBER																				
	VW-5			VW-6			VW-12			VW-13			VW-14			VW-15			VW-16		
	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)	% Open	Vacuum (In. H2O)	VFH (ppmv)
10/28/03	100	145	301.4	100	145	458.8	100	145	479.8	0	NM	4.5	100	130	42.7	0	NM	0.9	5-10	40	40.6
11/06/03	100	115	236	100	115	411	100	120	427	0	NM	7	100	105	27	0	NM	1	0	NM	2.2
11/13/03	100	110	(220) 245.6	100	116	(490) 386.1	100	110	(240) 240.3	0	NM	(16) 22	100	100	(26) 36.6	0	NM	(18) 16.5	0	NM	(<2.4) 0
11/20/03	100	120	268	100	120	382.6	100	120	234.7	0	NM	18.4	100	120	NM	0	NM	11.8	0	NM	0
11/26/03	100	130	276.6	100	130	328.1	100	130	109.2	0	NM	1.3	100	NM	NM	0	NM	0.4	0	NM	30
12/04/03	100	120	183.4	100	120	280.4	100	120	116.1	0	NM	2.3	100	120	82.4	0	NM	0	0	NM	29.6
12/09/03	100	NM	NM	100	NM	NM	100	NM	NM	0	NM	NM	100	NM	NM	0	NM	NM	0	NM	NM
12/16/03	0	NM	(120) NM	0	NM	(290) NM	0	NM	(110) NM	0	NM	(32) NM	0	NM	(15) NM	0	NM	(21) NM	0	NM	(<2.4) NM
01/20/04	100	86	(7.8) 237	100	86	(6.8) 380	100	86	(5.3) 210	50	80	(5.1) 27	0	NM	(33) 54	0	NM	(<2.4) 0	0	NM	(4.1) 13.7
01/27/04	100	84	220	100	84	346	100	84	197	50	78	25	0	NM	56	0	NM	0	0	NM	15
02/03/04	100	76	(280) 211	100	76	(480) 341	100	76	(190) 186	50	73	(25) 17	0	NM	(46) 49	0	NM	(14) 0	0	NM	(<2.4) 13
02/10/04	100	76	197	100	76	331	100	78	174	50	74	15	0	NM	47	0	NM	0	0	NM	11
02/17/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
02/24/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
03/05/04	100	NM	(270) 140	100	NM	(430) 330	100	NM	(190) 210	50	NM	(7.5) 35	0	NM	NM	0	NM	NM	0	NM	NM
04/07/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
04/15/04	100	NM	180	100	NM	310	100	NM	220	50	NM	30	0	NM	NM	0	NM	NM	0	NM	NM
04/21/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
04/26/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
05/05/04	100	NM	(330) 140	100	NM	(360) 260	100	NM	(200) 200	50	NM	(<2.4) 40	0	NM	NM	0	NM	NM	0	NM	NM
06/04/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
06/09/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
06/16/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
06/21/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
06/28/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
07/10/04	100	74	(220) 150	100	74	(170) 240	100	74	(69) 230	50	5	(7.2) 40	0	NM	NM	0	NM	NM	0	NM	NM
08/10/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
08/19/04	100	NM	NM	100	NM	NM	100	NM	NM	50	NM	NM	0	NM	NM	0	NM	NM	0	NM	NM
08/24/04	100	74	180	100	74	300	100	74	270	50	4	40	0	NM	NM	0	NM	NM	0	NM	NM
09/01/04	100	75	190	100	75	250	100	75	260	50	4	40	0	NM	NM	0	NM	NM	0	NM	NM
09/08/04	100	75	(150) 170	100	75	(92) 220	100	75	(50)240	50	4	(5.1) 30	0	NM	NM	0	NM	NM	0	NM	NM
10/04/04	100	15	(120) 182	100	15	(66) 161	100	15	(53) 90	100	15	(29) 33	100	15	(27) 32	0	NM	(3.2) 0	0	NM	(2.5) 1
10/11/04	100	97	101	100	97	184	100	97	27	50	97	0	0	NM	0	0	NM	0	0	NM	0
10/18/04	100	96	89	100	96	176	100	96	19	50	96	0	0	NM	0	0	NM	0	0	NM	0
10/25/04	100	98	144	100	98	130	100	98	70	50	98	0	0	NM	0	0	NM	0	0	NM	0
11/01/04	100	19	(120) 23	100	19	(37) 25	100	19	(36) 27	100	19	(13) 4	100	19	(9.6) 1	100	19	(4.8) 0	100	19	(5.4) 0
12/01/04	100	15	(5.6) 74	100	15	(<2.4) 905	100	15	(3.0) 82	100	15	(12) 70	100	15	(52) 69	0	NM	(<2.4) 0	0	NM	(<2.4) 0
12/07/04	100	93	19	100	93	509	100	93	5	0	NM	0	100	93	0	100	93	0	100	93	0
12/14/04	100	90	152	100	90	189	100	90	66	0	NM	0	100	90	0*	100	90	18	100	90	13
12/20/04	100	90	NM	100	90	NM	100	90	NM	0	NM	NM	100	90	NM	100	90	NM	100	90	NM
12/28/04	100	86	139	100	86	177	100	86	40	0	NM	0	100	86	*	100	86	20	100	86	15
01/03/05	100	20	(88) 70	100	20	(27) 21	100	20	(16) 10	100	20	(4.6) 5	100	20	(11) 11	100	20	(3.9) 0.5	100	20	(<2.4) 0

Notes:
( ) = Laboratory result
VFH = Volatile Fuel Hydrocarbons
ppmv = Parts per million by volume
NM = Not Measured
* = moisture present

TABLE 3

INDIVIDUAL WELL ANALYTICAL DATA

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

Sample ID	Date	VFH (ppmv)	Benzene (ppmv)	Toluene (ppmv)	Ethylbenzene (ppmv)	Total Xylenes (ppmv)	MTBE (ppmv)
VW-5	06/28/02	12	<1.2	<1.1	<0.92	<0.92	<2.8
	10/10/02	230	<1.6	8.0	1.2	20	<1.4
	07/29/03	520	2.6	19	6.1	72	<1.4
	10/15/03	77	<1.6	6.8	<1.2	9.6	<1.4
	11/13/03	220	1.7	12	2.5	34	<1.4
	12/16/03	120	<1.6	2.0	<1.2	16	<1.4
	01/22/04	7.8	<1.6	<1.3	<1.2	<3.5	<1.4
	02/06/04	280	<1.6	6.9	1.6	38	<1.4
	03/05/04	270	<1.6	8.4	2.3	36	<1.4
	05/05/04	330	<1.6	7.1	1.9	24	<1.4
	07/10/04	220	<1.6	7.6	1.6	28	<1.4
	09/08/04	150	<1.6	6.3	<1.2	17	<1.4
	10/04/04	120	<1.6	2.1	<1.2	8.9	<1.4
	11/01/04	120	<1.6	4.3	<1.2	17	<1.4
	12/01/04	5.6	<1.6	<1.3	<1.2	<3.5	<1.4
	01/03/05	88	<1.6	1.9	<1.2	8.0	<1.4
VW-6	06/28/02	180	1.2	4.4	<0.92	4.3	54
	09/24/02	450	3.8	17	2.2	44	<1.4
	10/10/02	440	<1.6	10	1.7	45	<1.4
	07/29/03	1200	8.5	46	9.4	120	1.9
	10/15/03	280	9.9	16	1.9	21	4.5
	11/13/03	490	4.3	27	5.5	70	<1.4
	12/16/03	290	<1.6	7.7	3.2	44	<1.4
	01/22/04	6.8	<1.6	<1.3	<1.2	<3.5	<1.4
	02/06/04	480	3.1	13	4.3	79	<1.4
	03/05/04	430	4.6	19	3.0	48	2.6
	05/05/04	360	<1.6	7.2	1.9	27	<1.4
	07/10/04	170	<1.6	4.3	<1.2	20	<1.4
	09/08/04	92	<1.6	2.4	<1.2	11	<1.4
	10/04/04	66	<1.6	<1.3	<1.2	6.4	<1.4
	11/01/04	37	<1.6	<1.3	<1.2	4.9	<1.4
	12/01/04	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	01/03/05	27	<1.6	<1.3	<1.2	<3.5	<1.4
VW-12	06/28/02	13	<1.2	<1.1	<0.92	<0.92	<2.8
	10/10/02	1400	14	81	12	110	5.3
	07/29/03	140	<1.6	<1.3	<1.2	11	<1.4
	10/15/03	12	<1.6	<1.3	<1.2	<3.5	<1.4
	11/13/03	240	2.4	18	2.3	21	<1.4
	12/16/03	110	<1.6	1.5	<1.2	13	<1.4
	01/22/04	5.3	<1.6	<1.3	<1.2	<3.5	<1.4
	02/06/04	190	<1.6	4.8	1.3	29	4.4
	03/05/04	190	<1.6	5.0	1.4	19	<1.4
	05/05/04	200	<1.6	3.1	<1.2	11	<1.4
	07/10/04	69	<1.6	<1.3	<1.2	<3.5	<1.4
	09/08/04	50	<1.6	<1.3	<1.2	<3.5	<1.4
	10/04/04	53	<1.6	<1.3	<1.2	3.6	<1.4
	11/01/04	36	<1.6	<1.3	<1.2	4.9	<1.4
	12/01/04	3.0	<1.6	<1.3	<1.2	<3.5	<1.4
	01/03/05	16	<1.6	<1.3	<1.2	<3.5	<1.4
VW-13	06/28/02	130	<1.2	<1.1	<0.92	<0.92	<2.8
	10/10/02	4.0	<1.6	<1.3	<1.2	<1.2	<1:4
	10/15/03	20	<1.6	<1.3	<1.2	<3.5	<1.4

TABLE 3

INDIVIDUAL WELL ANALYTICAL DATA

ARCO Facility No. 206
302 West First Street
Santa Ana, CA

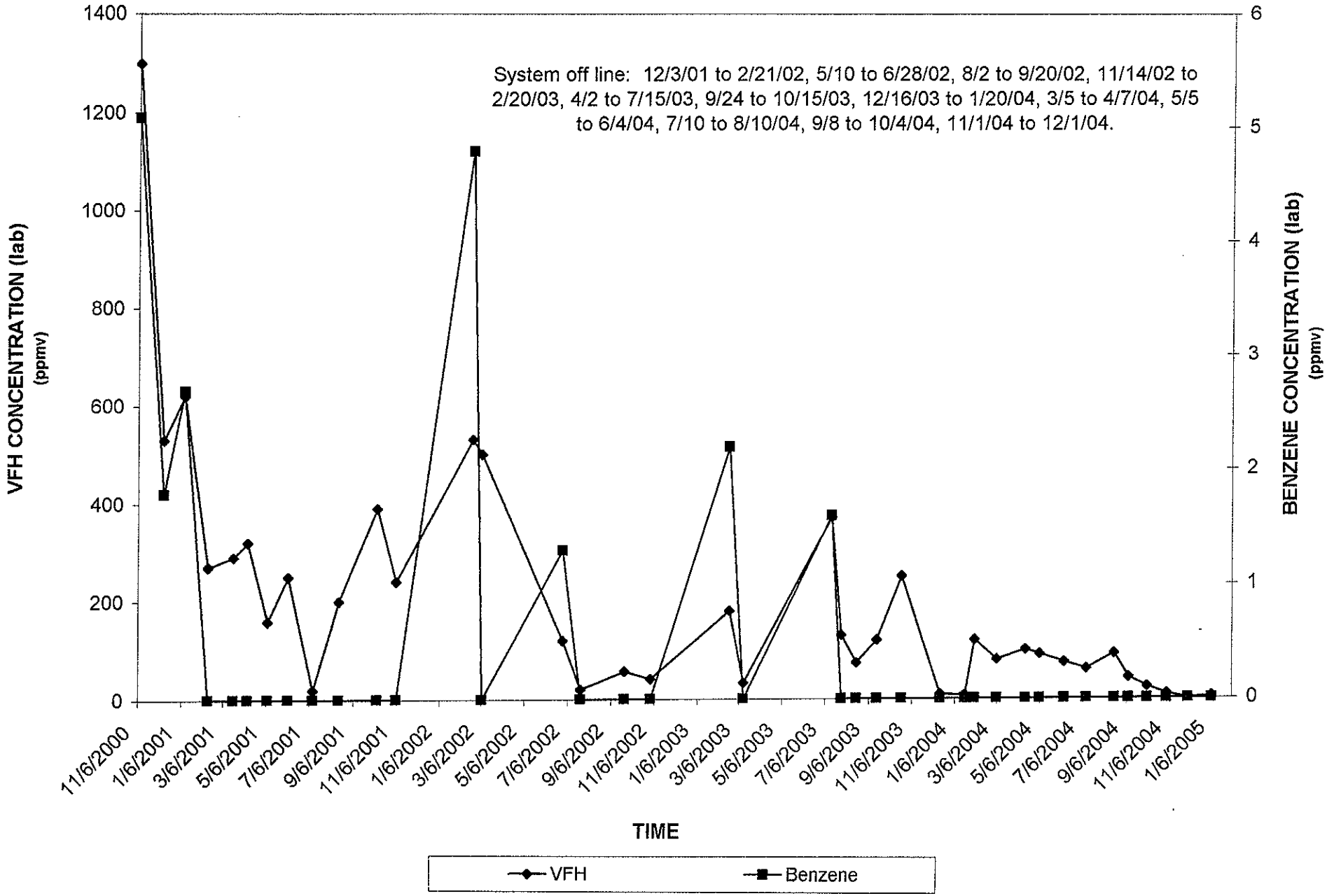
Sample ID	Date	VFH (ppmv)	Benzene (ppmv)	Toluene (ppmv)	Ethylbenzene (ppmv)	Total Xylenes (ppmv)	MTBE (ppmv)
VW-13 (cont.)	11/13/03	16	<1.6	<1.3	<1.2	<3.5	<1.4
	12/16/03	32	<1.6	<1.3	<1.2	<3.5	<1.4
	01/22/04	5.1	<1.6	<1.3	<1.2	<3.5	<1.4
	02/06/04	25	<1.6	<1.3	<1.2	<3.5	<1.4
	03/05/04	7.5	<1.6	<1.3	<1.2	<3.5	<1.4
	05/05/04	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	07/10/04	7.2	<1.6	<1.3	<1.2	<3.5	<1.4
	09/08/04	5.1	<1.6	<1.3	<1.2	<3.5	<1.4
	10/04/04	29	<1.6	1.7	<1.2	<3.5	<1.4
	11/01/04	13	<1.6	<1.3	<1.2	<3.5	<1.4
	12/01/04	12	<1.6	<1.3	<1.2	<3.5	<1.4
	01/03/05	4.6	<1.6	<1.3	<1.2	<3.5	<1.4
VW-14	07/29/03	200	<1.6	5.9	1.5	23	<1.4
	10/15/03	9.5	<1.6	<1.3	<1.2	<3.5	<1.4
	11/13/03	26	<1.6	1.3	<1.2	<3.5	<1.4
	12/16/03	15	<1.6	<1.3	<1.2	<3.5	<1.4
	01/22/04	33	<1.6	<1.3	<1.2	<3.5	<1.4
	02/06/04	46	<1.6	<1.3	<1.2	3.9	<1.4
	10/04/04	27	<1.6	1.4	<1.2	<3.5	<1.4
	11/01/04	9.6	<1.6	<1.3	<1.2	<3.5	<1.4
	12/01/04	52	<1.6	<1.3	<1.2	<3.5	<1.4
	01/03/05	11	<1.6	<1.3	<1.2	<3.5	<1.4
VW-15	06/28/02	8.5	<1.2	<1.1	<0.92	<0.92	<2.8
	10/10/02	79	<1.6	1.6	<1.2	6.5	<1.4
	07/29/03	61	<1.6	<1.3	<1.2	<3.5	<1.4
	10/15/03	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	11/13/03	18	<1.6	<1.3	<1.2	<3.5	<1.4
	12/16/03	21	<1.6	<1.3	<1.2	<3.5	<1.4
	01/22/04	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	02/06/04	14	<1.6	<1.3	<1.2	<3.5	<1.4
	10/04/04	3.2	<1.6	<1.3	<1.2	<3.5	<1.4
	11/01/04	4.8	<1.6	<1.3	<1.2	<3.5	<1.4
	12/01/04	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	01/03/05	3.9	<1.6	<1.3	<1.2	<3.5	<1.4
VW-16	06/28/02	9.9	<1.2	<1.1	<0.92	<0.92	<2.8
	10/10/02	12	<1.6	<1.3	<1.2	<1.2	<1.4
	07/29/03	51	<1.6	<1.3	<1.2	3.8	<1.4
	10/15/03	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	11/13/03	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	12/16/03	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	01/22/04	4.1	<1.6	<1.3	<1.2	<3.5	<1.4
	02/06/04	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	10/04/04	2.5	<1.6	<1.3	<1.2	<3.5	<1.4
	11/01/04	5.4	<1.6	<1.3	<1.2	<3.5	<1.4
	12/01/04	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4
	01/03/05	<2.4	<1.6	<1.3	<1.2	<3.5	<1.4

Notes:
VFH = Volatile Fuel Hydrocarbons
MTBE = Methyl Tertiary Butyl Ether
ppmv = parts per million volume
<1.2 = Not detect at listed laboratory reporting limit

GRAPH 1

VES INFLUENT VFH & BENZENE CONCENTRATIONS vs. TIME

ARCO FACILITY NO. 206



ATTACHMENT B

Laboratory Report and Chain-of-Custody Information

Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
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LABORATORY REPORT

Prepared For: Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project: ARCO 0206, Santa Ana

Sampled: 01/03/05
Received: 01/03/05
Issued: 01/11/05 16:03

NELAP #01108CA CA ELAP #1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 22°C and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IOA0038-01	INFLUENT	Air
IOA0038-02	EFFLUENT	Air
IOA0038-03	VW-5	Air
IOA0038-04	VW-6	Air
IOA0038-05	VW-12	Air
IOA0038-06	VW-13	Air
IOA0038-07	VW-14	Air
IOA0038-08	VW-15	Air
IOA0038-09	VW-16	Air

Reviewed By:

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOA0038

Sampled: 01/03/05
Received: 01/03/05

VOLATILE FUEL HYDROCARBONS/BTEX/MTBE in Air (EPA 8015/8021B MOD.)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOA0038-01 (INFLUENT - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	5A04001	2.4	**4.7**	1	1/4/2005	1/4/2005	
Benzene	EPA 8015M/8021M	5A04001	1.6	ND	1	1/4/2005	1/4/2005	
Toluene	EPA 8015M/8021M	5A04001	1.3	ND	1	1/4/2005	1/4/2005	
Ethylbenzene	EPA 8015M/8021M	5A04001	1.2	ND	1	1/4/2005	1/4/2005	
Xylenes, Total	EPA 8015M/8021M	5A04001	3.5	ND	1	1/4/2005	1/4/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	5A04001	1.4	ND	1	1/4/2005	1/4/2005	
Sample ID: IOA0038-02 (EFFLUENT - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	5A04001	2.4	ND	1	1/4/2005	1/4/2005	
Benzene	EPA 8015M/8021M	5A04001	1.6	ND	1	1/4/2005	1/4/2005	
Toluene	EPA 8015M/8021M	5A04001	1.3	ND	1	1/4/2005	1/4/2005	
Ethylbenzene	EPA 8015M/8021M	5A04001	1.2	ND	1	1/4/2005	1/4/2005	
Xylenes, Total	EPA 8015M/8021M	5A04001	3.5	ND	1	1/4/2005	1/4/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	5A04001	1.4	ND	1	1/4/2005	1/4/2005	
Sample ID: IOA0038-03 (VW-5 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	5A04001	2.4	**88**	1	1/4/2005	1/4/2005	
Benzene	EPA 8015M/8021M	5A04001	1.6	ND	1	1/4/2005	1/4/2005	
Toluene	EPA 8015M/8021M	5A04001	1.3	**1.9**	1	1/4/2005	1/4/2005	
Ethylbenzene	EPA 8015M/8021M	5A04001	1.2	ND	1	1/4/2005	1/4/2005	
Xylenes, Total	EPA 8015M/8021M	5A04001	3.5	**8.0**	1	1/4/2005	1/4/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	5A04001	1.4	ND	1	1/4/2005	1/4/2005	
Sample ID: IOA0038-04 (VW-6 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	5A04001	2.4	**27**	1	1/4/2005	1/4/2005	
Benzene	EPA 8015M/8021M	5A04001	1.6	ND	1	1/4/2005	1/4/2005	
Toluene	EPA 8015M/8021M	5A04001	1.3	ND	1	1/4/2005	1/4/2005	
Ethylbenzene	EPA 8015M/8021M	5A04001	1.2	ND	1	1/4/2005	1/4/2005	
Xylenes, Total	EPA 8015M/8021M	5A04001	3.5	ND	1	1/4/2005	1/4/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	5A04001	1.4	ND	1	1/4/2005	1/4/2005	
Sample ID: IOA0038-05 (VW-12 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	5A04001	2.4	**16**	1	1/4/2005	1/4/2005	
Benzene	EPA 8015M/8021M	5A04001	1.6	ND	1	1/4/2005	1/4/2005	
Toluene	EPA 8015M/8021M	5A04001	1.3	ND	1	1/4/2005	1/4/2005	
Ethylbenzene	EPA 8015M/8021M	5A04001	1.2	ND	1	1/4/2005	1/4/2005	
Xylenes, Total	EPA 8015M/8021M	5A04001	3.5	ND	1	1/4/2005	1/4/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	5A04001	1.4	ND	1	1/4/2005	1/4/2005	

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Pat Abe
Project Manager

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOA0038

Sampled: 01/03/05
Received: 01/03/05

VOLATILE FUEL HYDROCARBONS/BTEX/MTBE in Air (EPA 8015/8021B MOD.)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOA0038-06 (VW-13 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	5A04001	2.4	**4.6**	1	1/4/2005	1/4/2005	
Benzene	EPA 8015M/8021M	5A04001	1.6	ND	1	1/4/2005	1/4/2005	
Toluene	EPA 8015M/8021M	5A04001	1.3	ND	1	1/4/2005	1/4/2005	
Ethylbenzene	EPA 8015M/8021M	5A04001	1.2	ND	1	1/4/2005	1/4/2005	
Xylenes, Total	EPA 8015M/8021M	5A04001	3.5	ND	1	1/4/2005	1/4/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	5A04001	1.4	ND	1	1/4/2005	1/4/2005	
Sample ID: IOA0038-07 (VW-14 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	5A04001	2.4	**11**	1	1/4/2005	1/4/2005	
Benzene	EPA 8015M/8021M	5A04001	1.6	ND	1	1/4/2005	1/4/2005	
Toluene	EPA 8015M/8021M	5A04001	1.3	ND	1	1/4/2005	1/4/2005	
Ethylbenzene	EPA 8015M/8021M	5A04001	1.2	ND	1	1/4/2005	1/4/2005	
Xylenes, Total	EPA 8015M/8021M	5A04001	3.5	ND	1	1/4/2005	1/4/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	5A04001	1.4	ND	1	1/4/2005	1/4/2005	
Sample ID: IOA0038-08 (VW-15 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	5A04001	2.4	**3.9**	1	1/4/2005	1/4/2005	
Benzene	EPA 8015M/8021M	5A04001	1.6	ND	1	1/4/2005	1/4/2005	
Toluene	EPA 8015M/8021M	5A04001	1.3	ND	1	1/4/2005	1/4/2005	
Ethylbenzene	EPA 8015M/8021M	5A04001	1.2	ND	1	1/4/2005	1/4/2005	
Xylenes, Total	EPA 8015M/8021M	5A04001	3.5	ND	1	1/4/2005	1/4/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	5A04001	1.4	ND	1	1/4/2005	1/4/2005	
Sample ID: IOA0038-09 (VW-16 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	5A04001	2.4	ND	1	1/4/2005	1/4/2005	
Benzene	EPA 8015M/8021M	5A04001	1.6	ND	1	1/4/2005	1/4/2005	
Toluene	EPA 8015M/8021M	5A04001	1.3	ND	1	1/4/2005	1/4/2005	
Ethylbenzene	EPA 8015M/8021M	5A04001	1.2	ND	1	1/4/2005	1/4/2005	
Xylenes, Total	EPA 8015M/8021M	5A04001	3.5	ND	1	1/4/2005	1/4/2005	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	5A04001	1.4	ND	1	1/4/2005	1/4/2005	

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Project Manager

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOA0038

Sampled: 01/03/05
Received: 01/03/05

BENZENE in AIR (410A MOD.)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOA0038-02 (EFFLUENT - Air)								
Reporting Units: ppmv								
Benzene	410 A	5A05003	0.059	ND	1	1/5/2005	1/5/2005	

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Project ID: ARCO 0206, Santa Ana

Report Number: IOA0038

Sampled: 01/03/05
Received: 01/03/05

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: INFLUENT (IOA0038-01) - Air					
EPA 8015M/8021M	3	01/03/2005 14:00	01/03/2005 16:45	01/04/2005 09:33	01/04/2005 09:33
Sample ID: EFFLUENT (IOA0038-02) - Air					
410 A	3	01/03/2005 14:05	01/03/2005 16:45	01/05/2005 12:52	01/05/2005 12:52
EPA 8015M/8021M	3	01/03/2005 14:05	01/03/2005 16:45	01/04/2005 09:52	01/04/2005 09:52
Sample ID: VW-5 (IOA0038-03) - Air					
EPA 8015M/8021M	3	01/03/2005 14:10	01/03/2005 16:45	01/04/2005 10:21	01/04/2005 10:21
Sample ID: VW-6 (IOA0038-04) - Air					
EPA 8015M/8021M	3	01/03/2005 14:15	01/03/2005 16:45	01/04/2005 10:36	01/04/2005 10:36
Sample ID: VW-12 (IOA0038-05) - Air					
EPA 8015M/8021M	3	01/03/2005 14:20	01/03/2005 16:45	01/04/2005 10:57	01/04/2005 10:57
Sample ID: VW-13 (IOA0038-06) - Air					
EPA 8015M/8021M	3	01/03/2005 14:25	01/03/2005 16:45	01/04/2005 11:11	01/04/2005 11:11
Sample ID: VW-14 (IOA0038-07) - Air					
EPA 8015M/8021M	3	01/03/2005 14:30	01/03/2005 16:45	01/04/2005 11:27	01/04/2005 11:27
Sample ID: VW-15 (IOA0038-08) - Air					
EPA 8015M/8021M	3	01/03/2005 14:35	01/03/2005 16:45	01/04/2005 11:42	01/04/2005 11:42
Sample ID: VW-16 (IOA0038-09) - Air					
EPA 8015M/8021M	3	01/03/2005 14:40	01/03/2005 16:45	01/04/2005 12:07	01/04/2005 12:07

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Project Manager

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Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOA0038

Sampled: 01/03/05
Received: 01/03/05

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS/BTEX/MTBE in Air (EPA 8015/8021B MOD.)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5A04001 Extracted: 01/04/05										
Blank Analyzed: 01/04/2005 (5A04001-BLK1)										
Volatile Fuel Hydrocarbons (C6-C12)	ND	2.4	ppmv							
Benzene	ND	1.6	ppmv							
Toluene	ND	1.3	ppmv							
Ethylbenzene	ND	1.2	ppmv							
Xylenes, Total	ND	3.5	ppmv							
Methyl-tert-butyl Ether (MTBE)	ND	1.4	ppmv							
LCS Analyzed: 01/04/2005 (5A04001-BS1)										
Benzene	16.1	1.6	ppmv	16.5		98	85-115			
Toluene	14.0	1.3	ppmv	14.0		100	85-115			
Ethylbenzene	11.0	1.2	ppmv	12.2		90	70-125			
Xylenes, Total	35.5	3.5	ppmv	36.6		97	85-120			
Methyl-tert-butyl Ether (MTBE)	14.1	1.4	ppmv	14.9		95	75-125			
LCS Analyzed: 01/04/2005 (5A04001-BS2)										
Volatile Fuel Hydrocarbons (C6-C12)	59.8	2.4	ppmv	70.0		85	80-120			
Duplicate Analyzed: 01/04/2005 (5A04001-DUP1)					**Source: IOA0038-08**					
Volatile Fuel Hydrocarbons (C6-C12)	3.73	2.4	ppmv		3.9			4	20	
Benzene	ND	1.6	ppmv		ND				20	
Toluene	ND	1.3	ppmv		ND				20	
Ethylbenzene	ND	1.2	ppmv		ND				20	
Xylenes, Total	ND	3.5	ppmv		ND				20	
Methyl-tert-butyl Ether (MTBE)	ND	1.4	ppmv		ND				20	

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Project Manager

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Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: IOA0038

Sampled: 01/03/05
Received: 01/03/05

METHOD BLANK/QC DATA

BENZENE in AIR (410A MOD.)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5A05003 Extracted: 01/05/05										
Blank Analyzed: 01/05/2005 (5A05003-BLK1)										
Benzene	ND	0.059	ppmv							
Duplicate Analyzed: 01/05/2005 (5A05003-DUP1)					**Source: IOA0038-02**					
Benzene	ND	0.059	ppmv		ND				20	

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Project ID: ARCO 0206, Santa Ana

Report Number: IOA0038

Sampled: 01/03/05
Received: 01/03/05

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference

ADDITIONAL COMMENTS

For VFH (ppmv):

The molecular weight of 100 was used to convert Volatile Fuel Hydrocarbons from mg/m3 to ppm by volume (ppmv).

For Volatile Fuel Hydrocarbons (C6-C12):

Volatile Fuel Hydrocarbons (C6-C12) are quantitated against a gasoline standard.

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Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	NELAP	CA
410 A	Air	N/A	N/A
EPA 8015M/8021M	Air	N/A	N/A

NV and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Chain of Custody Record

bp

Project Name ARCO 206
BP BU/RM CO Portfolio: Atlantic Richfield Co. / Orange
BP Laboratory Contract Number: 461000
Requested Due Date (mm/dd/yy) Standard TAT

Date: 1/3/05

On-site Time:	Temp:
Off- site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Send To:		BP/RM Facility No.: 206	Consultant/Contractor: Delta Environmental Consultants
Lab Name:	Del Mar Analytical	BP/RM Facility Address: 302 W. First St.	Address: 27141 Aliso Creek Road, Suite 270
Lab Address:	17461 Derian Ave, Suite 100	Site ID No. Santa Ana, CA	Aliso Viejo, California 92656
	Irvine, California 92614-58	Site Lat/Long:	e-mail EDD: ckuhlmann@deltaenv.com
		California Global ID #:	Consultant/Contractor Project No.: 0074-1RP
Lab PM:	Patricia Abe	BP/RM PM Contact: DARRELL FAH	Consultant/Contractor Tele/Fax: (949) 360-5795
Tele/Fax:	(949) 261-1022	Address: 4 Centerpointe Drive	Consultant/Contractor PM PM: Aaron Baird
Report Type & QC Level:	Standard	La Palma, California	Invoice to: Consultant/Contractor or BP/RM (Circle one)
BP/RM Account No.:		Tele/Fax: (714) 473-9672	BP/RM Work Release No:
Lab Bottle Order No:			

Item No.	Sample Description	Time	Matrix: Soil/Solid	Water/Liquid	Sediments	Air	Laboratory No. 1DA0038	No. of containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	Requested Analysis: VFH (h) by 8015	BTEX/MTBE by 8021B	Benzene by 410	Sample Point Lat/Long and Comments
1	INFLUENT	1400				X		1					X	X		ENFOS #G09K3-0413
2	EFFLUENT	1405				X		2					X	X	X	WR66464
3	VW-5	1410				X		1					X	X		Provision Phase 3
4	VW-6	1415				X		1					X	X		
5	VW-12	1420				X		1					X	X		
6	VW-13	1425				X		1					X	X		
7	VW-14	1430				X		1					X	X		
8	VW-15	1435				X		1					X	X		
9	VW-16	1440				X		1					X	X		

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: M. Blaemire, II						
Sampler's Company: Delta Environmental		1/3/5	1645			
Shipment Date:						
Shipment Method:					1/3/5	16:45
Shipment Tracking No:						

Special Instructions:

Custody Seals In Place Yes ___ No X Temperature Blank Yes ___ No X Cooler Temperature on Receipt RT °F/C Trip Blank Yes ___ No X

Distribution: White Copy - Laboratory / Yellow Copy - BP/RM / Pink Copy - Consultant/Contractor

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LABORATORY REPORT

Prepared For: Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project: ARCO 0206, Santa Ana

Sampled: 12/01/04
Received: 12/01/04
Issued: 12/09/04 19:43

NELAP #01108CA CA ELAP #1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 22°C and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
INL0037-01	INFLUENT	Air
INL0037-02	EFFLUENT	Air
INL0037-03	VW-5	Air
INL0037-04	VW-6	Air
INL0037-05	VW-12	Air
INL0037-06	VW-13	Air
INL0037-07	VW-14	Air
INL0037-08	VW-15	Air
INL0037-09	VW-16	Air

Reviewed By:

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INL0037

Sampled: 12/01/04
Received: 12/01/04

VOLATILE FUEL HYDROCARBONS/BTEX/MTBE in Air (EPA 8015/8021B MOD.)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INL0037-01 (INFLUENT - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4L02045	2.4	ND	1	12/2/2004	12/2/2004	
Benzene	EPA 8015M/8021M	4L02045	1.6	ND	1	12/2/2004	12/2/2004	
Toluene	EPA 8015M/8021M	4L02045	1.3	ND	1	12/2/2004	12/2/2004	
Ethylbenzene	EPA 8015M/8021M	4L02045	1.2	ND	1	12/2/2004	12/2/2004	
Xylenes, Total	EPA 8015M/8021M	4L02045	3.5	ND	1	12/2/2004	12/2/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4L02045	1.4	ND	1	12/2/2004	12/2/2004	
Sample ID: INL0037-02 (EFFLUENT - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4L02045	2.4	ND	1	12/2/2004	12/2/2004	
Benzene	EPA 8015M/8021M	4L02045	1.6	ND	1	12/2/2004	12/2/2004	
Toluene	EPA 8015M/8021M	4L02045	1.3	ND	1	12/2/2004	12/2/2004	
Ethylbenzene	EPA 8015M/8021M	4L02045	1.2	ND	1	12/2/2004	12/2/2004	
Xylenes, Total	EPA 8015M/8021M	4L02045	3.5	ND	1	12/2/2004	12/2/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4L02045	1.4	ND	1	12/2/2004	12/2/2004	
Sample ID: INL0037-03 (VW-5 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4L02045	2.4	**5.6**	1	12/2/2004	12/2/2004	
Benzene	EPA 8015M/8021M	4L02045	1.6	ND	1	12/2/2004	12/2/2004	
Toluene	EPA 8015M/8021M	4L02045	1.3	ND	1	12/2/2004	12/2/2004	
Ethylbenzene	EPA 8015M/8021M	4L02045	1.2	ND	1	12/2/2004	12/2/2004	
Xylenes, Total	EPA 8015M/8021M	4L02045	3.5	ND	1	12/2/2004	12/2/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4L02045	1.4	ND	1	12/2/2004	12/2/2004	
Sample ID: INL0037-04 (VW-6 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4L02045	2.4	ND	1	12/2/2004	12/2/2004	
Benzene	EPA 8015M/8021M	4L02045	1.6	ND	1	12/2/2004	12/2/2004	
Toluene	EPA 8015M/8021M	4L02045	1.3	ND	1	12/2/2004	12/2/2004	
Ethylbenzene	EPA 8015M/8021M	4L02045	1.2	ND	1	12/2/2004	12/2/2004	
Xylenes, Total	EPA 8015M/8021M	4L02045	3.5	ND	1	12/2/2004	12/2/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4L02045	1.4	ND	1	12/2/2004	12/2/2004	
Sample ID: INL0037-05 (VW-12 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4L02045	2.4	**3.0**	1	12/2/2004	12/2/2004	
Benzene	EPA 8015M/8021M	4L02045	1.6	ND	1	12/2/2004	12/2/2004	
Toluene	EPA 8015M/8021M	4L02045	1.3	ND	1	12/2/2004	12/2/2004	
Ethylbenzene	EPA 8015M/8021M	4L02045	1.2	ND	1	12/2/2004	12/2/2004	
Xylenes, Total	EPA 8015M/8021M	4L02045	3.5	ND	1	12/2/2004	12/2/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4L02045	1.4	ND	1	12/2/2004	12/2/2004	

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Delta Env. Consultants - Aliso Viejo
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Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INL0037

Sampled: 12/01/04
Received: 12/01/04

VOLATILE FUEL HYDROCARBONS/BTEX/MTBE in Air (EPA 8015/8021B MOD.)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INL0037-06 (VW-13 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4L02045	2.4	**12**	1	12/2/2004	12/2/2004	
Benzene	EPA 8015M/8021M	4L02045	1.6	ND	1	12/2/2004	12/2/2004	
Toluene	EPA 8015M/8021M	4L02045	1.3	ND	1	12/2/2004	12/2/2004	
Ethylbenzene	EPA 8015M/8021M	4L02045	1.2	ND	1	12/2/2004	12/2/2004	
Xylenes, Total	EPA 8015M/8021M	4L02045	3.5	ND	1	12/2/2004	12/2/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4L02045	1.4	ND	1	12/2/2004	12/2/2004	
Sample ID: INL0037-07 (VW-14 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4L03092	2.4	**52**	1	12/3/2004	12/3/2004	
Benzene	EPA 8015M/8021M	4L03092	1.6	ND	1	12/3/2004	12/3/2004	
Toluene	EPA 8015M/8021M	4L03092	1.3	ND	1	12/3/2004	12/3/2004	
Ethylbenzene	EPA 8015M/8021M	4L03092	1.2	ND	1	12/3/2004	12/3/2004	
Xylenes, Total	EPA 8015M/8021M	4L03092	3.5	ND	1	12/3/2004	12/3/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4L03092	1.4	ND	1	12/3/2004	12/3/2004	
Sample ID: INL0037-08 (VW-15 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4L03092	2.4	ND	1	12/3/2004	12/3/2004	
Benzene	EPA 8015M/8021M	4L03092	1.6	ND	1	12/3/2004	12/3/2004	
Toluene	EPA 8015M/8021M	4L03092	1.3	ND	1	12/3/2004	12/3/2004	
Ethylbenzene	EPA 8015M/8021M	4L03092	1.2	ND	1	12/3/2004	12/3/2004	
Xylenes, Total	EPA 8015M/8021M	4L03092	3.5	ND	1	12/3/2004	12/3/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4L03092	1.4	ND	1	12/3/2004	12/3/2004	
Sample ID: INL0037-09 (VW-16 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4L03092	2.4	ND	1	12/3/2004	12/3/2004	
Benzene	EPA 8015M/8021M	4L03092	1.6	ND	1	12/3/2004	12/3/2004	
Toluene	EPA 8015M/8021M	4L03092	1.3	ND	1	12/3/2004	12/3/2004	
Ethylbenzene	EPA 8015M/8021M	4L03092	1.2	ND	1	12/3/2004	12/3/2004	
Xylenes, Total	EPA 8015M/8021M	4L03092	3.5	ND	1	12/3/2004	12/3/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4L03092	1.4	ND	1	12/3/2004	12/3/2004	

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Pat Abe
Project Manager

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INL0037

Sampled: 12/01/04
Received: 12/01/04

BENZENE in AIR (410A MOD.)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INL0037-02 (EFFLUENT - Air)								
Reporting Units: ppmv								
Benzene	410 A	4L01042	0.059	ND	1	12/1/2004	12/1/2004	

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Project ID: ARCO 0206, Santa Ana

Report Number: INL0037

Sampled: 12/01/04
Received: 12/01/04

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: INFLUENT (INL0037-01) - Air					
EPA 8015M/8021M	3	12/01/2004 14:02	12/01/2004 15:20	12/02/2004 17:11	12/02/2004 17:11
Sample ID: EFFLUENT (INL0037-02) - Air					
410 A	3	12/01/2004 14:00	12/01/2004 15:20	12/01/2004 20:42	12/01/2004 20:42
EPA 8015M/8021M	3	12/01/2004 14:00	12/01/2004 15:20	12/02/2004 17:27	12/02/2004 17:27
Sample ID: VW-5 (INL0037-03) - Air					
EPA 8015M/8021M	3	12/01/2004 14:04	12/01/2004 15:20	12/02/2004 17:43	12/02/2004 17:43
Sample ID: VW-6 (INL0037-04) - Air					
EPA 8015M/8021M	3	12/01/2004 14:06	12/01/2004 15:20	12/02/2004 17:57	12/02/2004 17:57
Sample ID: VW-12 (INL0037-05) - Air					
EPA 8015M/8021M	3	12/01/2004 14:08	12/01/2004 15:20	12/02/2004 18:12	12/02/2004 18:12
Sample ID: VW-13 (INL0037-06) - Air					
EPA 8015M/8021M	3	12/01/2004 14:10	12/01/2004 15:20	12/02/2004 18:26	12/02/2004 18:26
Sample ID: VW-14 (INL0037-07) - Air					
EPA 8015M/8021M	3	12/01/2004 14:12	12/01/2004 15:20	12/03/2004 19:29	12/03/2004 19:29
Sample ID: VW-15 (INL0037-08) - Air					
EPA 8015M/8021M	3	12/01/2004 14:14	12/01/2004 15:20	12/03/2004 19:47	12/03/2004 19:47
Sample ID: VW-16 (INL0037-09) - Air					
EPA 8015M/8021M	3	12/01/2004 14:16	12/01/2004 15:20	12/03/2004 20:04	12/03/2004 20:04

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Project ID: ARCO 0206, Santa Ana

Report Number: INL0037

Sampled: 12/01/04
Received: 12/01/04

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS/BTEX/MTBE in Air (EPA 8015/8021B MOD.)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4L02045 Extracted: 12/02/04										
Blank Analyzed: 12/02/04 (4L02045-BLK1)										
Volatile Fuel Hydrocarbons (C6-C12)	ND	2.4	ppmv							
Benzene	ND	1.6	ppmv							
Toluene	ND	1.3	ppmv							
Ethylbenzene	ND	1.2	ppmv							
Xylenes, Total	ND	3.5	ppmv							
Methyl-tert-butyl Ether (MTBE)	ND	1.4	ppmv							
LCS Analyzed: 12/02/04 (4L02045-BS1)										
Volatile Fuel Hydrocarbons (C6-C12)	66.3	2.4	ppmv	70.0		95	80-120			
LCS Analyzed: 12/02/04 (4L02045-BS2)										
Benzene	16.3	1.6	ppmv	16.5		99	85-115			
Toluene	15.2	1.3	ppmv	14.0		109	85-115			
Ethylbenzene	13.9	1.2	ppmv	12.2		114	70-125			
Xylenes, Total	37.3	3.5	ppmv	36.6		102	85-115			
Methyl-tert-butyl Ether (MTBE)	14.3	1.4	ppmv	14.9		96	75-125			
Duplicate Analyzed: 12/02/04 (4L02045-DUP1)					**Source: INL0037-03**					
Volatile Fuel Hydrocarbons (C6-C12)	7.31	2.4	ppmv		5.6			26	20	*BA*
Benzene	ND	1.6	ppmv		ND				20	
Toluene	ND	1.3	ppmv		ND				20	
Ethylbenzene	ND	1.2	ppmv		ND				20	
Xylenes, Total	ND	3.5	ppmv		ND				20	
Methyl-tert-butyl Ether (MTBE)	0.150	1.4	ppmv		0.91			143	20	*BA*
Batch: 4L03092 Extracted: 12/03/04										
Blank Analyzed: 12/03/04 (4L03092-BLK1)										
Volatile Fuel Hydrocarbons (C6-C12)	ND	2.4	ppmv							
Benzene	ND	1.6	ppmv							
Toluene	ND	1.3	ppmv							
Ethylbenzene	ND	1.2	ppmv							
Xylenes, Total	ND	3.5	ppmv							
Methyl-tert-butyl Ether (MTBE)	ND	1.4	ppmv							

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METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS/BTEX/MTBE in Air (EPA 8015/8021B MOD.)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4L03092 Extracted: 12/03/04										
LCS Analyzed: 12/03/04 (4L03092-BS1)										
Volatile Fuel Hydrocarbons (C6-C12)	66.5	2.4	ppmv	70.0		95	80-120			
LCS Analyzed: 12/04/04 (4L03092-BS2)										
Benzene	16.1	1.6	ppmv	16.5		98	85-115			
Toluene	14.4	1.3	ppmv	14.0		103	85-115			
Ethylbenzene	11.1	1.2	ppmv	12.2		91	70-125			
Xylenes, Total	35.6	3.5	ppmv	36.6		97	85-115			
Methyl-tert-butyl Ether (MTBE)	13.0	1.4	ppmv	14.9		87	75-125			
Duplicate Analyzed: 12/03/04 (4L03092-DUP1)					**Source: INL0046-02**					
Volatile Fuel Hydrocarbons (C6-C12)	1.61	2.4	ppmv		1.4			14	20	
Benzene	ND	1.6	ppmv		ND				20	
Toluene	ND	1.3	ppmv		ND				20	
Ethylbenzene	ND	1.2	ppmv		ND				20	
Xylenes, Total	ND	3.5	ppmv		ND				20	
Methyl-tert-butyl Ether (MTBE)	ND	1.4	ppmv		ND				20	

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METHOD BLANK/QC DATA

BENZENE in AIR (410A MOD.)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4L01042 Extracted: 12/01/04										
Blank Analyzed: 12/01/04 (4L01042-BLK1)										
Benzene	ND	0.059	ppmv							
Duplicate Analyzed: 12/01/04 (4L01042-DUP1)					**Source: INK1969-01**					
Benzene	0.0425	0.059	ppmv		0.045			6	20	

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INL0037

Sampled: 12/01/04
Received: 12/01/04

DATA QUALIFIERS AND DEFINITIONS

BA	Relative percent difference out of control
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

ADDITIONAL COMMENTS

For VFH (ppmv):

The molecular weight of 100 was used to convert Volatile Fuel Hydrocarbons from mg/m3 to ppm by volume (ppmv).

For Volatile Fuel Hydrocarbons (C6-C12):

Volatile Fuel Hydrocarbons (C6-C12) are quantitated against a gasoline standard.

8015 Analysis EDF Parlabel Cross Reference

Analyte	EDF Parlabel	Analyte	EDF Parlabel
Benzene	BZ	Ethylbenzene	EBZ
Methyl-tert-butyl Ether (MTBE)	MTBE	Toluene	BZME
Volatile Fuel Hydrocarbons (C6-C12)	GROC6C12	Xylenes, Total	XYLENES

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INL0037

Sampled: 12/01/04
Received: 12/01/04

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	NELAP	CA
410 A	Air	N/A	N/A
EPA 8015M/8021M	Air	N/A	N/A

NV and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Chain of Custody Record

bp

Project Name ARCO 206
BP BU/RM CO Portfolio: Atlantic Richfield Co. / Orange
BP Laboratory Contract Number: 461000
Requested Due Date (mm/dd/yy) Standard TAT

Date: 12/1/04

On-site Time:	Temp:
Off- site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Send To:		BP/RM Facility No.: 206	Consultant/Contractor: Delta Environmental Consultants
Lab Name:	Del Mar Analytical	BP/RM Facility Address: 302 W. First St.	Address: 27141 Aliso Creek Road, Suite 270
Lab Address:	17461 Derian Ave, Suite 100	Site ID No. Santa Ana, CA	Aliso Viejo, California 92656
	Irvine, California 92614-58	Site Lat/Long:	e-mail EDD: ckuhlmann@deltaenv.com
		California Global ID #:	Consultant/Contractor Project No.: 0074-1RP
Lab PM:	Patricia Abe	BP/RM PM Contact: DARRELL FAH	Consultant/Contractor Tele/Fax: (949) 360-5795
Tele/Fax:	(949) 261-1022	Address: 4 Centerpointe Drive	Consultant/Contractor PM PM: Aaron Baird
Report Type & QC Level:	Standard	La Palma, California	Invoice to: Consultant/Contractor or BP/RM (Circle one)
BP/RM Account No.:		Tele/Fax: (714) 473-9672	BP/RM Work Release No: WR 66464 G09K3-0049

Lab Bottle Order No: INL0037

Item No.	Sample Description	Time	Matrix: Soil/Solid	Water/Liquid	Sediments	Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl		Requested Analysis: VFH (h) by 8015	BTEX/MTBE by 8021B	Benzene by 410									Sample Point Lat/Long and Comments
1	INFLUENT	1402				X		1						X	X										ENFOS #G09K3-0413
2	EFFLUENT	1400				X		2						X	X	X									WR66464
3	VW-5	1404				X		1						X	X										Provision Phase 3
4	VW-6	1406				X		1						X	X										
5	VW-12	1408				X		1						X	X										
6	VW-13	1410				X		1						X	X										
7	VW-14	1412				X		1						X	X										
8	VW-15	1414				X		1						X	X										
9	VW-16	1416				X		1						X	X										

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: M. Blackwell						
Sampler's Company: Delta Environmental		12/1/4	1520		12/1/04	1520
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions:

Custody Seals In Place Yes ___ No ✓ Temperature Blank Yes ___ No ✓ Cooler Temperature on Receipt 4 °F/C Trip Blank Yes ___ No ✓

Distribution: White Copy - Laboratory / Yellow Copy - BP/RM / Pink Copy - Consultant/Contractor

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LABORATORY REPORT

Prepared For: Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project: ARCO 0206, Santa Ana

Sampled: 11/01/04
Received: 11/01/04
Issued: 11/09/04 19:15

NELAP #01108CA CA ELAP #1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 22°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
INK0021-01	INFLUENT	Air
INK0021-02	EFFLUENT	Air
INK0021-03	VW-5	Air
INK0021-04	VW-6	Air
INK0021-05	VW-12	Air
INK0021-06	VW-13	Air
INK0021-07	VW-14	Air
INK0021-08	VW-15	Air
INK0021-09	VW-16	Air

Reviewed By:

Del Mar Analytical, Irvine
Pat Abe
Project Manager

Del Mar Analytical

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INK0021

Sampled: 11/01/04
Received: 11/01/04

VOLATILE FUEL HYDROCARBONS/BTEX/MTBE in Air (EPA 8015/8021B MOD.)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INK0021-01 (INFLUENT - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4K03045	2.4	**9.5**	1	11/3/2004	11/3/2004	
Benzene	EPA 8015M/8021M	4K03045	1.6	ND	1	11/3/2004	11/3/2004	
Toluene	EPA 8015M/8021M	4K03045	1.3	ND	1	11/3/2004	11/3/2004	
Ethylbenzene	EPA 8015M/8021M	4K03045	1.2	ND	1	11/3/2004	11/3/2004	
Xylenes, Total	EPA 8015M/8021M	4K03045	3.5	ND	1	11/3/2004	11/3/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4K03045	1.4	ND	1	11/3/2004	11/3/2004	
Sample ID: INK0021-02 (EFFLUENT - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4K03045	2.4	**5.6**	1	11/3/2004	11/3/2004	
Benzene	EPA 8015M/8021M	4K03045	1.6	ND	1	11/3/2004	11/3/2004	
Toluene	EPA 8015M/8021M	4K03045	1.3	ND	1	11/3/2004	11/3/2004	
Ethylbenzene	EPA 8015M/8021M	4K03045	1.2	ND	1	11/3/2004	11/3/2004	
Xylenes, Total	EPA 8015M/8021M	4K03045	3.5	ND	1	11/3/2004	11/3/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4K03045	1.4	ND	1	11/3/2004	11/3/2004	
Sample ID: INK0021-03 (VW-5 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4K03045	2.4	**120**	1	11/3/2004	11/3/2004	
Benzene	EPA 8015M/8021M	4K03045	1.6	ND	1	11/3/2004	11/3/2004	
Toluene	EPA 8015M/8021M	4K03045	1.3	**4.3**	1	11/3/2004	11/3/2004	
Ethylbenzene	EPA 8015M/8021M	4K03045	1.2	ND	1	11/3/2004	11/3/2004	
Xylenes, Total	EPA 8015M/8021M	4K03045	3.5	**17**	1	11/3/2004	11/3/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4K03045	1.4	ND	1	11/3/2004	11/3/2004	
Sample ID: INK0021-04 (VW-6 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4K03045	2.4	**37**	1	11/3/2004	11/3/2004	
Benzene	EPA 8015M/8021M	4K03045	1.6	ND	1	11/3/2004	11/3/2004	
Toluene	EPA 8015M/8021M	4K03045	1.3	ND	1	11/3/2004	11/3/2004	
Ethylbenzene	EPA 8015M/8021M	4K03045	1.2	ND	1	11/3/2004	11/3/2004	
Xylenes, Total	EPA 8015M/8021M	4K03045	3.5	**4.9**	1	11/3/2004	11/3/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4K03045	1.4	ND	1	11/3/2004	11/3/2004	
Sample ID: INK0021-05 (VW-12 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4K03045	2.4	**36**	1	11/3/2004	11/3/2004	
Benzene	EPA 8015M/8021M	4K03045	1.6	ND	1	11/3/2004	11/3/2004	
Toluene	EPA 8015M/8021M	4K03045	1.3	ND	1	11/3/2004	11/3/2004	
Ethylbenzene	EPA 8015M/8021M	4K03045	1.2	ND	1	11/3/2004	11/3/2004	
Xylenes, Total	EPA 8015M/8021M	4K03045	3.5	**4.9**	1	11/3/2004	11/3/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4K03045	1.4	ND	1	11/3/2004	11/3/2004	

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INK0021

Sampled: 11/01/04
Received: 11/01/04

VOLATILE FUEL HYDROCARBONS/BTEX/MTBE in Air (EPA 8015/8021B MOD.)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INK0021-06 (VW-13 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4K03045	2.4	**13**	1	11/3/2004	11/3/2004	
Benzene	EPA 8015M/8021M	4K03045	1.6	ND	1	11/3/2004	11/3/2004	
Toluene	EPA 8015M/8021M	4K03045	1.3	ND	1	11/3/2004	11/3/2004	
Ethylbenzene	EPA 8015M/8021M	4K03045	1.2	ND	1	11/3/2004	11/3/2004	
Xylenes, Total	EPA 8015M/8021M	4K03045	3.5	ND	1	11/3/2004	11/3/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4K03045	1.4	ND	1	11/3/2004	11/3/2004	
Sample ID: INK0021-07 (VW-14 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4K03045	2.4	**9.6**	1	11/3/2004	11/3/2004	
Benzene	EPA 8015M/8021M	4K03045	1.6	ND	1	11/3/2004	11/3/2004	
Toluene	EPA 8015M/8021M	4K03045	1.3	ND	1	11/3/2004	11/3/2004	
Ethylbenzene	EPA 8015M/8021M	4K03045	1.2	ND	1	11/3/2004	11/3/2004	
Xylenes, Total	EPA 8015M/8021M	4K03045	3.5	ND	1	11/3/2004	11/3/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4K03045	1.4	ND	1	11/3/2004	11/3/2004	
Sample ID: INK0021-08 (VW-15 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4K03045	2.4	**4.8**	1	11/3/2004	11/3/2004	
Benzene	EPA 8015M/8021M	4K03045	1.6	ND	1	11/3/2004	11/3/2004	
Toluene	EPA 8015M/8021M	4K03045	1.3	ND	1	11/3/2004	11/3/2004	
Ethylbenzene	EPA 8015M/8021M	4K03045	1.2	ND	1	11/3/2004	11/3/2004	
Xylenes, Total	EPA 8015M/8021M	4K03045	3.5	ND	1	11/3/2004	11/3/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4K03045	1.4	ND	1	11/3/2004	11/3/2004	
Sample ID: INK0021-09 (VW-16 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4K03045	2.4	**5.4**	1	11/3/2004	11/3/2004	
Benzene	EPA 8015M/8021M	4K03045	1.6	ND	1	11/3/2004	11/3/2004	
Toluene	EPA 8015M/8021M	4K03045	1.3	ND	1	11/3/2004	11/3/2004	
Ethylbenzene	EPA 8015M/8021M	4K03045	1.2	ND	1	11/3/2004	11/3/2004	
Xylenes, Total	EPA 8015M/8021M	4K03045	3.5	ND	1	11/3/2004	11/3/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4K03045	1.4	ND	1	11/3/2004	11/3/2004	

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INK0021

Sampled: 11/01/04
Received: 11/01/04

BENZENE in AIR (410A MOD.)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INK0021-02 (EFFLUENT - Air)								
Reporting Units: ppmv								
Benzene	410 A	4K03043	0.059	ND	1	11/3/2004	11/3/2004	

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INK0021

Sampled: 11/01/04
Received: 11/01/04

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: INFLUENT (INK0021-01) - Air					
EPA 8015M/8021M	3	11/01/2004 08:05	11/01/2004 16:10	11/03/2004 12:50	11/03/2004 12:50
Sample ID: EFFLUENT (INK0021-02) - Air					
410 A	3	11/01/2004 08:00	11/01/2004 16:10	11/03/2004 15:38	11/03/2004 15:38
EPA 8015M/8021M	3	11/01/2004 08:00	11/01/2004 16:10	11/03/2004 13:09	11/03/2004 13:09
Sample ID: VW-5 (INK0021-03) - Air					
EPA 8015M/8021M	3	11/01/2004 08:10	11/01/2004 16:10	11/03/2004 13:40	11/03/2004 13:40
Sample ID: VW-6 (INK0021-04) - Air					
EPA 8015M/8021M	3	11/01/2004 08:15	11/01/2004 16:10	11/03/2004 14:27	11/03/2004 14:27
Sample ID: VW-12 (INK0021-05) - Air					
EPA 8015M/8021M	3	11/01/2004 08:20	11/01/2004 16:10	11/03/2004 14:43	11/03/2004 14:43
Sample ID: VW-13 (INK0021-06) - Air					
EPA 8015M/8021M	3	11/01/2004 08:25	11/01/2004 16:10	11/03/2004 14:59	11/03/2004 14:59
Sample ID: VW-14 (INK0021-07) - Air					
EPA 8015M/8021M	3	11/01/2004 08:30	11/01/2004 16:10	11/03/2004 16:21	11/03/2004 16:21
Sample ID: VW-15 (INK0021-08) - Air					
EPA 8015M/8021M	3	11/01/2004 08:35	11/01/2004 16:10	11/03/2004 16:35	11/03/2004 16:35
Sample ID: VW-16 (INK0021-09) - Air					
EPA 8015M/8021M	3	11/01/2004 08:40	11/01/2004 16:10	11/03/2004 16:51	11/03/2004 16:51

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INK0021

Sampled: 11/01/04
Received: 11/01/04

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS/BTEX/MTBE in Air (EPA 8015/8021B MOD.)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4K03045 Extracted: 11/03/04										
Blank Analyzed: 11/03/04 (4K03045-BLK1)										
Volatile Fuel Hydrocarbons (C6-C12)	ND	2.4	ppmv							
Benzene	ND	1.6	ppmv							
Toluene	ND	1.3	ppmv							
Ethylbenzene	ND	1.2	ppmv							
Xylenes, Total	ND	3.5	ppmv							
Methyl-tert-butyl Ether (MTBE)	ND	1.4	ppmv							
LCS Analyzed: 11/03/04 (4K03045-BS1)										
Benzene	16.5	1.6	ppmv	16.5		100	85-115			
Toluene	15.2	1.3	ppmv	14.0		109	85-115			
Ethylbenzene	12.6	1.2	ppmv	12.2		103	70-125			
Xylenes, Total	38.8	3.5	ppmv	36.6		106	85-115			
Methyl-tert-butyl Ether (MTBE)	14.6	1.4	ppmv	14.9		98	75-125			
LCS Analyzed: 11/03/04 (4K03045-BS2)										
Volatile Fuel Hydrocarbons (C6-C12)	67.6	2.4	ppmv	70.0		97	80-120			
Duplicate Analyzed: 11/03/04 (4K03045-DUP1)					**Source: INK0021-03**					
Volatile Fuel Hydrocarbons (C6-C12)	125	2.4	ppmv		120			4	20	
Benzene	0.736	1.6	ppmv		0.82			11	20	
Toluene	3.99	1.3	ppmv		4.3			7	20	
Ethylbenzene	0.687	1.2	ppmv		0.74			7	20	
Xylenes, Total	16.2	3.5	ppmv		17			5	20	
Methyl-tert-butyl Ether (MTBE)	ND	1.4	ppmv		ND				20	

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INK0021

Sampled: 11/01/04
Received: 11/01/04

METHOD BLANK/QC DATA

BENZENE in AIR (410A MOD.)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4K03043 Extracted: 11/03/04										
Blank Analyzed: 11/03/04 (4K03043-BLK1)										
Benzene	ND	0.059	ppmv							
Duplicate Analyzed: 11/03/04 (4K03043-DUP1)					**Source: INK0052-01**					
Benzene	ND	0.059	ppmv		ND				20	

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Delta Env. Consultants - Aliso Viejo
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Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INK0021

Sampled: 11/01/04
Received: 11/01/04

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference

ADDITIONAL COMMENTS

For VFH (ppmv):

The molecular weight of 100 was used to convert Volatile Fuel Hydrocarbons from mg/m3 to ppm by volume (ppmv).

For Volatile Fuel Hydrocarbons (C6-C12):

Volatile Fuel Hydrocarbons (C6-C12) are quantitated against a gasoline standard.

Del Mar Analytical, Irvine
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Project Manager

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INK0021

Sampled: 11/01/04
Received: 11/01/04

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	NELAP	CA
410 A	Air	N/A	N/A
EPA 8015M/8021M	Air	N/A	N/A

NV and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Chain of Custody Record

Project Name ARCO 206
BP BU/RM CO Portfolio: Atlantic Richfield Co. / Orange
BP Laboratory Contract Number: 461000
Date: 11/1/04 **Requested Due Date (mm/dd/yy)** Standard TAT

On-site Time:	Temp:
Off- site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Send To:		BP/RM Facility No.:	206	Consultant/Contractor:	Delta Environmental Consultants
Lab Name:	Del Mar Analytical	BP/RM Facility Address:	302 W. First St.	Address:	27141 Aliso Creek Road, Suite 270
Lab Address:	17461 Derian Ave, Suite 100	Site ID No.	Santa Ana, CA		Aliso Viejo, California 92656
	Irvine, California 92614-58	Site Lat/Long:		e-mail EDD:	ckuhlmann@deltaenv.com
		California Global ID #:		Consultant/Contractor Project No.:	0074-1RP
Lab PM:	Patricia Abe	BP/RM PM Contact:	DARRELL FAH	Consultant/Contractor Tele/Fax:	(949) 360-5795
Tele/Fax:	(949) 261-1022	Address:	4 Centerpointe Drive	Consultant/Contractor PM PM:	Aaron Baird
Report Type & QC Level:	Standard		La Palma, California	Invoice to:	Consultant/Contractor or BP/RM (Circle one)
BP/RM Account No.:		Tele/Fax:	(714) 473-9672	BP/RM Work Release No:	

Lab Bottle Order No:

Item No.	Sample Description	Time	Matrix: Soil/Solid	Water/Liquid	Sediments	Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl		Requested Analysis: VFH (h) by 8015	BTEX/MTBE by 8021B	Benzene by 410										Sample Point Lat/Long and Comments
							JAK0024																			
1	INFLUENT	0805				X		1						X	X											ENFOS #G09K3-0413
2	EFFLUENT	0800				X		2						X	X	X										WR66464
3	VW-5	0810				X		1						X	X											Provision Phase 3
4	VW-6	0815				X		1						X	X											
5	VW-12	0820				X		1						X	X											
6	VW-13	0825				X		1						X	X											
7	VW-14	0830				X		1						X	X											
8	VW-15	0835				X		1						X	X											
9	VW-16	0840				X		1						X	X											

INITIAL

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: M. Blackwell						
Sampler's Company: Delta Environmental		11/1/04	1610			
Shipment Date:						
Shipment Method:					11/1/04	1610
Shipment Tracking No:						

Special Instructions:

Custody Seals In Place Yes ___ No ✓ Temperature Blank Yes ___ No ✓ Cooler Temperature on Receipt 0 °F/C Trip Blank Yes ___ No ✓

Distribution: White Copy - Laboratory / Yellow Copy - BP/RM / Pink Copy - Consultant/Contractor

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LABORATORY REPORT

Prepared For: Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project: ARCO 0206, Santa Ana

Sampled: 10/04/04
Received: 10/04/04
Issued: 10/13/04 12:09

NELAP #01108CA CA ELAP #1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 22°C and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
INJ0149-01	EFF	Air
INJ0149-02	INF	Air
INJ0149-03	VW-5	Air
INJ0149-04	VW-6	Air
INJ0149-05	VW-12	Air
INJ0149-06	VW-13	Air
INJ0149-07	VW-14	Air
INJ0149-08	VW-15	Air
INJ0149-09	VW-16	Air

Reviewed By:

Del Mar Analytical, Irvine
Pat Abe
Project Manager

Del Mar Analytical

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INJ0149

Sampled: 10/04/04
Received: 10/04/04

VOLATILE FUEL HYDROCARBONS/BTEX/MTBE in Air (EPA 8015/8021B MOD.)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ0149-01 (EFF - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4J05031	2.4	**3.3**	1	10/5/2004	10/5/2004	
Benzene	EPA 8015M/8021M	4J05031	1.6	ND	1	10/5/2004	10/5/2004	
Toluene	EPA 8015M/8021M	4J05031	1.3	ND	1	10/5/2004	10/5/2004	
Ethylbenzene	EPA 8015M/8021M	4J05031	1.2	ND	1	10/5/2004	10/5/2004	
Xylenes, Total	EPA 8015M/8021M	4J05031	3.5	ND	1	10/5/2004	10/5/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4J05031	1.4	ND	1	10/5/2004	10/5/2004	
Sample ID: INJ0149-02 (INF - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4J05031	2.4	**24**	1	10/5/2004	10/5/2004	
Benzene	EPA 8015M/8021M	4J05031	1.6	ND	1	10/5/2004	10/5/2004	
Toluene	EPA 8015M/8021M	4J05031	1.3	**1.6**	1	10/5/2004	10/5/2004	
Ethylbenzene	EPA 8015M/8021M	4J05031	1.2	ND	1	10/5/2004	10/5/2004	
Xylenes, Total	EPA 8015M/8021M	4J05031	3.5	ND	1	10/5/2004	10/5/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4J05031	1.4	ND	1	10/5/2004	10/5/2004	
Sample ID: INJ0149-03 (VW-5 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4J05031	2.4	**120**	1	10/5/2004	10/5/2004	
Benzene	EPA 8015M/8021M	4J05031	1.6	ND	1	10/5/2004	10/5/2004	
Toluene	EPA 8015M/8021M	4J05031	1.3	**2.1**	1	10/5/2004	10/5/2004	
Ethylbenzene	EPA 8015M/8021M	4J05031	1.2	ND	1	10/5/2004	10/5/2004	
Xylenes, Total	EPA 8015M/8021M	4J05031	3.5	**8.9**	1	10/5/2004	10/5/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4J05031	1.4	ND	1	10/5/2004	10/5/2004	
Sample ID: INJ0149-04 (VW-6 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4J05031	2.4	**66**	1	10/5/2004	10/5/2004	
Benzene	EPA 8015M/8021M	4J05031	1.6	ND	1	10/5/2004	10/5/2004	
Toluene	EPA 8015M/8021M	4J05031	1.3	ND	1	10/5/2004	10/5/2004	
Ethylbenzene	EPA 8015M/8021M	4J05031	1.2	ND	1	10/5/2004	10/5/2004	
Xylenes, Total	EPA 8015M/8021M	4J05031	3.5	**6.4**	1	10/5/2004	10/5/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4J05031	1.4	ND	1	10/5/2004	10/5/2004	
Sample ID: INJ0149-05 (VW-12 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4J05031	2.4	**53**	1	10/5/2004	10/5/2004	
Benzene	EPA 8015M/8021M	4J05031	1.6	ND	1	10/5/2004	10/5/2004	
Toluene	EPA 8015M/8021M	4J05031	1.3	ND	1	10/5/2004	10/5/2004	
Ethylbenzene	EPA 8015M/8021M	4J05031	1.2	ND	1	10/5/2004	10/5/2004	
Xylenes, Total	EPA 8015M/8021M	4J05031	3.5	**3.6**	1	10/5/2004	10/5/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4J05031	1.4	ND	1	10/5/2004	10/5/2004	

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INJ0149

Sampled: 10/04/04
Received: 10/04/04

VOLATILE FUEL HYDROCARBONS/BTEX/MTBE in Air (EPA 8015/8021B MOD.)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ0149-06 (VW-13 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4J05031	2.4	**29**	1	10/5/2004	10/5/2004	
Benzene	EPA 8015M/8021M	4J05031	1.6	ND	1	10/5/2004	10/5/2004	
Toluene	EPA 8015M/8021M	4J05031	1.3	**1.7**	1	10/5/2004	10/5/2004	
Ethylbenzene	EPA 8015M/8021M	4J05031	1.2	ND	1	10/5/2004	10/5/2004	
Xylenes, Total	EPA 8015M/8021M	4J05031	3.5	ND	1	10/5/2004	10/5/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4J05031	1.4	ND	1	10/5/2004	10/5/2004	
Sample ID: INJ0149-07 (VW-14 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4J05031	2.4	**27**	1	10/5/2004	10/5/2004	
Benzene	EPA 8015M/8021M	4J05031	1.6	ND	1	10/5/2004	10/5/2004	
Toluene	EPA 8015M/8021M	4J05031	1.3	**1.4**	1	10/5/2004	10/5/2004	
Ethylbenzene	EPA 8015M/8021M	4J05031	1.2	ND	1	10/5/2004	10/5/2004	
Xylenes, Total	EPA 8015M/8021M	4J05031	3.5	ND	1	10/5/2004	10/5/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4J05031	1.4	ND	1	10/5/2004	10/5/2004	
Sample ID: INJ0149-08 (VW-15 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4J05031	2.4	**3.2**	1	10/5/2004	10/5/2004	
Benzene	EPA 8015M/8021M	4J05031	1.6	ND	1	10/5/2004	10/5/2004	
Toluene	EPA 8015M/8021M	4J05031	1.3	ND	1	10/5/2004	10/5/2004	
Ethylbenzene	EPA 8015M/8021M	4J05031	1.2	ND	1	10/5/2004	10/5/2004	
Xylenes, Total	EPA 8015M/8021M	4J05031	3.5	ND	1	10/5/2004	10/5/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4J05031	1.4	ND	1	10/5/2004	10/5/2004	
Sample ID: INJ0149-09 (VW-16 - Air)								
Reporting Units: ppmv								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015M/8021M	4J05031	2.4	**2.5**	1	10/5/2004	10/5/2004	
Benzene	EPA 8015M/8021M	4J05031	1.6	ND	1	10/5/2004	10/5/2004	
Toluene	EPA 8015M/8021M	4J05031	1.3	ND	1	10/5/2004	10/5/2004	
Ethylbenzene	EPA 8015M/8021M	4J05031	1.2	ND	1	10/5/2004	10/5/2004	
Xylenes, Total	EPA 8015M/8021M	4J05031	3.5	ND	1	10/5/2004	10/5/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8015M/8021M	4J05031	1.4	ND	1	10/5/2004	10/5/2004	

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INJ0149

Sampled: 10/04/04
Received: 10/04/04

BENZENE in AIR (410A MOD.)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ0149-01 (EFF - Air)								
Reporting Units: ppmv								
Benzene	410 A	4J05032	0.059	ND	1	10/5/2004	10/5/2004	

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INJ0149

Sampled: 10/04/04
Received: 10/04/04

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: EFF (INJ0149-01) - Air					
410 A	3	10/04/2004 14:45	10/04/2004 16:45	10/05/2004 11:37	10/05/2004 11:37
EPA 8015M/8021M	3	10/04/2004 14:45	10/04/2004 16:45	10/05/2004 09:13	10/05/2004 09:13
Sample ID: INF (INJ0149-02) - Air					
EPA 8015M/8021M	3	10/04/2004 14:50	10/04/2004 16:45	10/05/2004 09:29	10/05/2004 09:29
Sample ID: VW-5 (INJ0149-03) - Air					
EPA 8015M/8021M	3	10/04/2004 14:55	10/04/2004 16:45	10/05/2004 09:44	10/05/2004 09:44
Sample ID: VW-6 (INJ0149-04) - Air					
EPA 8015M/8021M	3	10/04/2004 15:00	10/04/2004 16:45	10/05/2004 10:00	10/05/2004 10:00
Sample ID: VW-12 (INJ0149-05) - Air					
EPA 8015M/8021M	3	10/04/2004 15:05	10/04/2004 16:45	10/05/2004 10:15	10/05/2004 10:15
Sample ID: VW-13 (INJ0149-06) - Air					
EPA 8015M/8021M	3	10/04/2004 15:10	10/04/2004 16:45	10/05/2004 10:29	10/05/2004 10:29
Sample ID: VW-14 (INJ0149-07) - Air					
EPA 8015M/8021M	3	10/04/2004 15:15	10/04/2004 16:45	10/05/2004 10:46	10/05/2004 10:46
Sample ID: VW-15 (INJ0149-08) - Air					
EPA 8015M/8021M	3	10/04/2004 15:20	10/04/2004 16:45	10/05/2004 12:25	10/05/2004 12:25
Sample ID: VW-16 (INJ0149-09) - Air					
EPA 8015M/8021M	3	10/04/2004 15:25	10/04/2004 16:45	10/05/2004 11:21	10/05/2004 11:21

Del Mar Analytical, Irvine
Pat Abe
Project Manager

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Del Mar Analytical

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Delta Env. Consultants - Aliso Viejo
27141 Aliso Creek Road, Suite 270
Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INJ0149

Sampled: 10/04/04
Received: 10/04/04

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS/BTEX/MTBE in Air (EPA 8015/8021B MOD.)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4J05031 Extracted: 10/05/04										
Blank Analyzed: 10/05/04 (4J05031-BLK1)										
Volatile Fuel Hydrocarbons (C6-C12)	ND	2.4	ppmv							
Benzene	ND	1.6	ppmv							
Toluene	ND	1.3	ppmv							
Ethylbenzene	ND	1.2	ppmv							
Xylenes, Total	ND	3.5	ppmv							
Methyl-tert-butyl Ether (MTBE)	ND	1.4	ppmv							
LCS Analyzed: 10/05/04 (4J05031-BS1)										
Benzene	16.2	1.6	ppmv	16.5		98	85-115			
Toluene	14.5	1.3	ppmv	14.0		104	85-115			
Ethylbenzene	13.6	1.2	ppmv	12.2		111	70-125			
Xylenes, Total	35.3	3.5	ppmv	36.6		96	85-115			
Methyl-tert-butyl Ether (MTBE)	14.2	1.4	ppmv	14.9		95	75-125			
LCS Analyzed: 10/05/04 (4J05031-BS2)										
Volatile Fuel Hydrocarbons (C6-C12)	66.0	2.4	ppmv	70.0		94	80-120			
Duplicate Analyzed: 10/05/04 (4J05031-DUP1)					**Source: INJ0149-08**					
Volatile Fuel Hydrocarbons (C6-C12)	2.80	2.4	ppmv		3.2			13	20	
Benzene	ND	1.6	ppmv		ND				20	
Toluene	ND	1.3	ppmv		ND				20	
Ethylbenzene	ND	1.2	ppmv		ND				20	
Xylenes, Total	ND	3.5	ppmv		ND				20	
Methyl-tert-butyl Ether (MTBE)	ND	1.4	ppmv		ND				20	

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Delta Env. Consultants - Aliso Viejo
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Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INJ0149

Sampled: 10/04/04
Received: 10/04/04

METHOD BLANK/QC DATA

BENZENE in AIR (410A MOD.)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4J05032 Extracted: 10/05/04										
Blank Analyzed: 10/05/04 (4J05032-BLK1)										
Benzene	ND	0.059	ppmv							
Duplicate Analyzed: 10/05/04 (4J05032-DUP1)					**Source: INJ0149-01**					
Benzene	ND	0.059	ppmv		ND				20	

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Delta Env. Consultants - Aliso Viejo 27141 Aliso Creek Road, Suite 270 Aliso Viejo, CA 92656 Attention: Aaron Baird	Project ID: ARCO 0206, Santa Ana Report Number: INJ0149	Sampled: 10/04/04 Received: 10/04/04

DATA QUALIFIERS AND DEFINITIONS

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

RPD Relative Percent Difference

ADDITIONAL COMMENTS

For VFH (ppmv):

The molecular weight of 100 was used to convert Volatile Fuel Hydrocarbons from mg/m3 to ppm by volume (ppmv).

For Volatile Fuel Hydrocarbons (C6-C12):

Volatile Fuel Hydrocarbons (C6-C12) are quantitated against a gasoline standard.

Del Mar Analytical, Irvine
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Project Manager

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Delta Env. Consultants - Aliso Viejo
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Aliso Viejo, CA 92656
Attention: Aaron Baird

Project ID: ARCO 0206, Santa Ana

Report Number: INJ0149

Sampled: 10/04/04
Received: 10/04/04

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	NELAP	CA
410 A	Air	N/A	N/A
EPA 8015M/8021M	Air	N/A	N/A

NV and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

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Page 1 of 1

Chain of Custody Record

Project Name Arco 206
BP BU/GEM CO Portfolio: Orange
BP Laboratory Contract Number: 461-000
Requested Due Date (mm/dd/yy) 10 day

On-site Time:	Temp:
Off- site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Send To:	BP/GEM Facility No.: ~~1905~~ 206 RT 10/4/04	Consultant/Contractor: Delta
Lab Name: Del Mar	BP/GEM Facility Address: Santa Ana per MB	Address: 27141 Aliso Creek #27b
Lab Address: 17461 Derian #100	Site ID No. ~~1905~~ 206 RT 10/4/04 per MB	Aliso Viejo, CA 92656
Irvine, CA 92614	Site Lat/Long:	e-mail EDD:
	California Global ID #:	Consultant/Contractor Project No.:
Lab PM: Pat Abe	BP/GEM PM Contact: Darrel Fah	Consultant/Contractor Tele/Fax:
Tele/Fax: 949 261-1022	Address: 4 Centerpointe	Consultant/Contractor PM: Aaron
Report Type & QC Level:	La Palma, CA 90623	Invoice to: Consultant or BP or Atlantic Richfield Co (Circle one)
BP/GEM Account No.:	Tele/Fax:	BP/GEM Work Release No WR 66464 609K3-009

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	Preservatives: H_2SO_4	Preservatives: HNO_3	Preservatives: HCl	Requested Analysis: BTEX 8021	Requested Analysis: BTEX/TPH	Requested Analysis: EPA 8260	Requested Analysis: EPA 8270	Requested Analysis: MTBE BTEX By 8021	Requested Analysis: 8015 TPHg	Requested Analysis: Bez By HLC	Sample Point Lat/Long and Comments
1	EFF	1445	10/4/04			X	IND149	2									X	X	X	
2	INF	1450				X		1									X	X		
3	VW-5	1455				X		1									X	X		
4	VW-6	1500				X		1									X	X		
5	VW-12	1505				X		1									X	X		
6	VW-13	1510				X		1									X	X		
7	VW-14	1515				X		1									X	X		
8	VW-15	1520				X		1									X	X		
9	VW-16	1525				X		1									X	X		
10																				

INITIAL DRB

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: M. Blackwell						
Sampler's Company: Delta		10/4/04	1645			
Shipment Date:						
Shipment Method:						
Shipment Tracking No:				Van Banks	10-4-04	1645

Special Instructions:

Custody Seals In Place Yes ___ No ✓ Cooler Temperature on Receipt RT °F/C Trip Blank Yes ___ No ✓

LABORATORY

BP COC Rev. 2 4/18/03